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Forty-five abstracts represent projects prepared by faculty personnel from Western Council on Higher Education for Nursing (WCHEN) member schools who were participants in a short-term course, "Improving Instruction Through the Use of Selected Tools and Techniques." Programed instruction projects involve various clinical areas and deal with such subjects as arithmetic for nurses, interpersonal relationships, asepsis, intramuscular injection, traction, student counseling, physiology of the endocrine system, and allergy and hypersensitivity. Television teaching projects deal with basic public health statistics, medications, and leadership development. Some independent study project subjects are school nursing, lesson planning, teaching the history of nursing, structured and semi-structured method, psychiatric and public health nursing problems, and principles of administration, supervision, and team management. Team teaching projects deal with such subjects as transition from hospital to home, nursing care in diabetes, and fluid and electrolyte imbalance. (JK)

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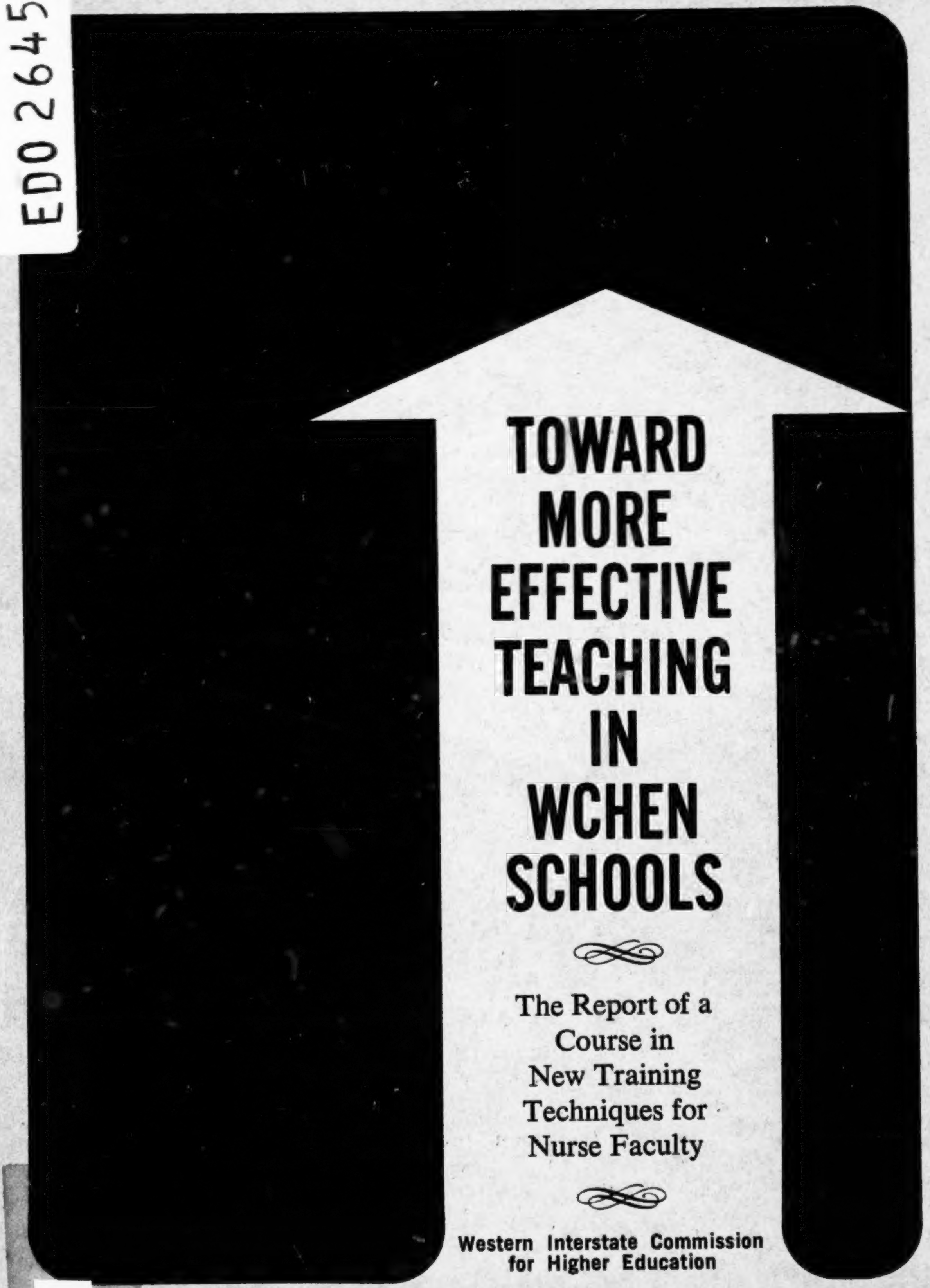

TOWARD MORE EFFECTIVE TEACHING IN WCHEN SCHOOLS

* * *

The Report of a
Course in
New Training
Techniques for
Nurse Faculty

* * *

**Western Interstate Commission
for Higher Education**

[illegible] Jo Eleanor

VT000836

The Western Interstate Commission for Higher Education is a public agency organized to administer the Western Regional Education Compact, which became operative in 1953 and now includes 13 Western states. The Commission consists of 39 members, three appointed by the governor of each member state.

Purpose of the Commission include: (1) making basic studies of needs and resources in higher education, particularly in the health sciences; (2) serving as a fact-finding agency and clearing house for interstate programs in Western higher education.

The Commission's interest in nursing education was stimulated by the growing shortage of academically prepared people to teach the nurses of the future. In August, 1955, the Commission authorized action to support and promote a regional program in collegiate nursing education, with emphasis on graduate study and research.

About WCHEN

WCHEN, the Western Council on Higher Education for Nursing, was organized in January, 1957, under the auspices of the Western Interstate Commission for Higher Education. WCHEN has these aims:

To undertake coperative planning for nursing education programs in the West.

To identify problems in nursing education which need cooperative study and action.

To stimulate research in nursing in the Western region.

Membership is open to every accredited college and university in the West which offers a program in nursing leading to the associate, the baccalaureate, or a higher degree. As of September, 1964, 66 such schools hold membership charters and participate in WCHEN and its programs.

Member colleges and universities are represented in WCHEN and in WCHEN's basic structural units, the seminars — Graduate, Baccalaureate, Associate Degree, and Continuation Education — by nurse educators appointed by the president of the institution. The representatives to each seminar select their own officers, which include a chairman, a vice chairman, and a secretary. The chairman of the Graduate Seminar serves as the chairman of WCHEN, and the chairman and vice chairman of the Graduate Seminar and the chairmen of the other three seminars serve as the executive committee for WCHEN.

Regular meetings of WCHEN and the seminars are held twice each year in various cities within the 13 Western states. During the interi mperiod, WCHEN's programs are directed by the seminar officers, the executive committee, and a small permanent staff. The member schools contribute greatly through participation of faculty members in various projects and committees.

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TOWARD MORE EFFECTIVE TEACHING IN WCHEN SCHOOLS

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The report of a short-term course in improving instruction
through the use of selected teaching tools and techniques
under the direction of

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JO ELEANOR ELLIOTT

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Western Interstate Commission for Higher Education

University East Campus
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FOREWORD

The projects abstracted in this report were prepared by participants in a short-term course, "Improving Instruction Through the Use of Selected Tools and Techniques," sponsored by the Western Council on Higher Education for Nursing. This experience was offered to nurse faculty personnel from the member schools. Each of the projects has as its program the use of one of the methods — educational television, programmed instruction, team teaching, or independent study — in the teaching of some segment of the nursing curriculum. Copies of the complete project reports are on file in the WCHEN office.

Financial support for this course was provided through a short-term traineeship grant from the Division of Nursing, United States Public Health Service.

The assistance lent to this project by the Educational Television Departments at the University of Utah and the University of California, San Francisco, is greatfully acknowledged. Editorial assistance was provided by Majorie V. Batey, School of Nursing, University of Washington.

The contributions of the nurse staff and resource people, with Mrs. Betty Dietrich serving as chairman of the staff and course sessions for the second and third weeks, are especially noted with appreciation. The combined knowledge of the staff members and the ease of their working together in teams with the participants resulted in the outcomes achieved.

Jo Eleanor Elliott
Project Director

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(These persons served also as the nurse staff for the course.)

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In addition, assistance at the University of Utah was provided by Keith Engar, Director of the University Radio-Television Services, and his staff; Oakley Gordon, Associate Professor of Psychology; and Weldon Moffit, Director of Leadership Training. Irving Merrill, Director of Television Research, and his staff, provided assistance at the University of California Medical Center, San Francisco.

INTRODUCTION

One of the objectives outlined by the Western Interstate Commission for Higher Education (WICHE) in its request to the W. K. Kellogg Foundation for continued support of the Western Council on Higher Education for Nursing (WCHEN) was "to explore the applicability to nursing education of experimental teaching methods, including honors programs, independent study, programmed learning, and educational television." Soon after the funds granted by the Foundation became available in January, 1962, the Executive Committee of WCHEN appointed a sub-committee to delineate steps through which this objectives could be achieved.

During meetings of this sub-committee, various new teaching methods were explored and four — television, programmed instruction, team teaching, and independent study — were selected as particularly applicable to the teaching of nursing; lists of source materials were compiled; available institutes and workshops relevant to these teaching methods were listed; and plans were developed to initiate a short-term course in which nurse faculty members could select and utilize one of these methods in the teaching of some aspect of nursing. This course was planned as a series of three one-week sessions over a period of one year which would allow opportunity for the participants to develope and utilize a teaching project. A proposal requesting financial support for this endeavor was drafted, approved by the WCHEN and WICHE, and submitted to the Traineeship Grants Branch, Division of Nursing, United States Public Health Service. A short-term traineeship grant was made to WICHE to support the course.

The course was made available to sixty nurse faculty personnel from WCHEN member schools. These faculty trainees were to be competent instructors in clinical nursing who had direct responsibility for teaching students enrolled in medical-surgical, psychiatric, maternal-child, or public health nursing courses. A total of fifty completed the course, attending the three one-week sessions and submitting a project report.

Toward More Effective Teaching in WCHEN Schools

PURPOSE AND OBJECTIVES OF THE COURSE

The course was designed to improve the learning experiences of students in Western baccalaureate schools of nursing by assisting nurse faculty members to improve and extend their teaching skills through the use of selected teaching tools and techniques, including educational television, programmed learning, independent study, and team teaching.

The objectives of the course were:

1. To improve the learning experiences of nursing students through experimentation in the use of some of the newer teaching tools and techniques; educotional television, programmed learning, independent study, and team teaching.
2. To assist teachers of nursing to increase their knowledge and to improve their skill in the use of new teaching tools and techniques. Consideration was also given to the extension of the skills of teachers to a larger number of students.
3. To study and educational philosophy and learning theories underlying the utilization of these educational tools and techniques.
4. To encourage the dissemination of knowledge about new teaching tools and techniques to other nurse educators in the West.

This course was visualized by the Western Council on Higher Education for Nursing as one way to improve the quality of baccalaureate education in nursing in the West. Since all baccalaureate nursing programs in the thirteen Western states are WCHEN members, faculty members from all such programs were eligible to participate. After opportunity for participation was offered to all baccalaureate programs, the course was offered to associate degree programs holding WCHEN membership. Four associate degree faculty members participated.

COURSE ARRANGEMENT AND CONTENT

The course was divided into three one-week sessions. The first session, held in Salt Lake City, July 8-12, 1963, was devoted to the examination of the theoretical background of these newer teaching tools and techniques, to review of related research, and to demonstration of the specific methods. At this time, the participants were encouraged to become familiar with each of the tools and techniques and to select one that they could use and test in their own teaching.

The participants were provided opportunity during the second session — October 14-18, 1963, Salt Lake City — to work independently in the development of the design of their individual projects with consultation from the staff. Attention also given to the development of tools by means of which the participants could evaluate the use of these methods in their own teaching.

During the period between the second and third sessions of the course, the participants experimented with the application of their selected tool or technique in teaching on-going courses in their home schools.

At the third session — June 22-26, 1964, Oakland, California — the participants had the opportunity to refine and complete their reports, share their experiences, and if appropriate, extend and modify their project designs for future use.

Members of the group were encouraged to select their own projects, work independently, and seek consultation when the need arose. Trial of the selected project in their own teaching between conference sessions was expected as a part of the course.

Each of the resource staff, who had been selected for his competence in a specific area of methodology, worked with one of the nurse staff (the subcommittee members) as a team to provide consistent guidance to the participants. In team teaching, educational television, and independent study the resource staff remained constant through the three sessions. In programmed instruction one expert attended the first session only, one attended the second and third. Continuity in this case was provided through direct contact between the two resource staff members.

Fifty-five faculty members from baccalaureate programs and four from associate degree programs enrolled; fifty of the fifty-nine enrollees completed the course. Each of those fifty persons submitted either progress or completed reports of projects undertaken or underway in the home school. In some instances, two or more participants from the same school worked together on a project. Hence, the total number of projects is less than the number of participants. Reports submitted include eight in team teaching, fourteen in independent study, five in educational television, and twelve in programmed learning. The abstracts of those reports make up the body of this publication.

PARTICIPANTS' EVALUATION OF THE EXPERIENCE

Opportunity was provided for the participants to evaluate the course at the end of each one-week session. Review of these evaluation reports indicates that the participants believed this course to be of sufficient value to recommend its repetition for another group of faculty members. Some persons felt that the participants in this first course would gain further benefit from an additional series. There was apparent consensus that the educational experience offered students in WCHEN schools had been improved through faculty participation in this course. Content aspects mentioned as particulary beneficial included the emphasis placed on clearly-stated behavioral student objectives as well as information concerning the specific tools and techniques. Individual consultation with resource staff and small group discussions were considered the most helpful teaching methods employed. The opportunity to focus on a particular aspect and method of teaching in a setting removed from on-going job responsibilities was viewed as contributing to the success of the venture.

Course participants also reported some frustrations. Some members of the group had expected a more directed and structured experience, and suggest a more thorough orientation be provided to potential enrollees in the future. Others stressed the need to more clearly inform the "home school" of the participant's need for released time and, in some instances, financial assistance, if the project were to be entirely successful. Dissemination of information concerning these new teaching tools and techniques to other faculty members in the home setting was not believed to have been achieved to a significant degree. In this respect, better orientation of all faculty members to the objectives of this short-term course was believed essential.

From the standpoint of physical arrangements for possible future courses, the enrollees suggest that adequate library resources and equipment (such as typewriters) be made more readily accessible to the living area than was possible in this first course.

STAFF EVALUATION AND RECOMMENDATIONS

Both the nurse staff and the resource staff expressed satisfaction with the degree to which the objectives were achieved. The venture was viewed as successful. The key to this accomplishment was the participants' active involvement in the development of the evaluation of an instructional plan utilizing one of the specific teaching tools or techniques.

Unexpected dividends reported by the staff included the participant's clarification of educational goals, change in the participants' attitudes toward experimentations, and a sharpening of their skills in educational research.

The members of the staff developed the recommendations to be considered in planning for similar endeavors in the future, that:

1. The same general time plan of three one-week sessions within a period of several months to one year be retained.
2. The development of an instructional plan utilizing one of the specific tools or technics by each participant continue to be a course requirement.
3. The participants should be carefully selected. Each candidate should submit an application for review by a central admissions committee.
4. A firm structure of the course plan and requirements should be provided the participants no later than the first session.
5. The first session should be planned around a small-group and person-to-person contacts rather than large-group lecture periods.
6. Provisions be made to permit participants teaching in the same clinical fields to spend some time together in small-group sessions.

7. Samples of materials similar to the expected projects be provided to participants as one way to stimulate their creativity.
8. The deans or directors of the schools make committments which would allow the participants the released time and financial support essential to completion of their projects.
9. A follow-up study of the participants' actual use of the newer teaching methods be made one year following the termination of the course. This could be accomplished through a mailed questionnaire.

ABSTRACTS OF PROJECTS UTILIZING PROGRAMMED INSTRUCTION

TEACHING THE NURSE: ROLE IN HELPING FAMILIES ASSUME RESPONSIBILITY

Public Health Nursing and/or Psychiatric Nursing
Junior or Senior Level Students

Helen Beckley **Idaho State University**

Introduction

A slide-sound film was developed which demonstrates four levels of family-centered responsibility. It is intended for students in psychiatric or public health nursing.

In the past, this material on the nurse's role in helping a family assume responsibility has been presented through lectures and discussions. It was the opinion of the students that the material was uninteresting and too often not meaningful. Since this is extremely important content, the instructor sought a new method for presenting it. The sound-slide film was selected for the following reasons:

1. The material could be presented in and interesting and dramatic manner.
2. The students were easily motivated to learn through its presentation.
3. The students learned thoroughly the role of the nurse through participating in producing the script.
4. The slides can be easily changed and the tape modified as needed.
5. The slides and tapes could be developed economically.

Objectives:

(Junior and Senior Students)

A. Explain the four general levels at which a nurse works in helping a family assume responsibilities for its own health problems.

B. In actual family counseling or home visitation, the nurse makes a decision as to the proper level for helping a family and explains the reasons for her decision.

Design:

The sound-slid film is descriptive. the cartoon slides and narrative illustrate and explain the four levels of family-centered responsibility.

Evaluation devices used:

A. The students completed a paper and pencil test that explained the four general levels at which a nurse works in helping a family assume responsibilities for its own health problems. Since the students had participated in developing the tape, they knew the material and received 100 per cent on the test. In the future, it will be possible to objectively test the students following presentation of the material.

B. The students actually counseled with a family and reported to the instructor the level at which they would work and explained the reason for their decisions.

Conclusions

The slide-sound program helped the students learn effectively the nursing skills that were needed in helping a family assume increasing levels of responsibility. Through actually observing the nurse in the various slides and listening to the interviewing technique, the students had the opportunity to learn the techniques used by nurses in helping a family assume increasing responsibility for itself.

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Problems encountered:

Actually there were few problems aside that of the pressure of time and expense in making the slides. The art student's concept of the nurse proved interesting. His concept reflected the movie concept of a glamorous, sexy, shapely maiden who posed beside a doctor holding his instruments and only moving on call.

Ideas for further studies:

Since the students were so interested in the slide-sound program, additional areas of public health nursing and psychiatric nursing could be developed. For example, the public health nurse making a first visit to a new mother and her baby; the psychiatric nurse admitting a new patient to a ward; the student nurse counseling a mother in a child health conference.

A STUDY TO MEASURE THE TEACHING EFFECTIVENESS OF A PROGRAMMED TEXT

Sophomore Level Students in Obstretical Nursing

Genevieve Burcham **Montana State College**

Introduction:

The problem was to consider the use of a specific programmed text, *Introduction ot Asepsis* by Marie M. Seedor, as a self-study, home assignment with two groups of students in maternal-chlid care nursing and to do a comparison study between the two groups.

The students in Maternal-Child Care were at the basic level in the Hospital. The two groups, 14 in each, had completed three quarters at the College Campus and one clinical quarter in the Hospital. Previous educational gackground on Campus included the physical science courses (Bacteriology, Anatomy and Physiology and Chemistry), also an Introduction to Nursing. In the first clinical quarter Fundamentals of Nursing was taught; it included Nursing Procedures, Introduction to Pharmacology, Introduction to Medical-Surgical Nursing and Problems in Clinical Nursing. The students in Maternal-Child Care Winter quarter had some theory in Medical-Surgical Asepsis but clinical experience was limited. Those students participating in Spring quarter had an additional quarter and a half (16 weeks) of theory and experience in Medical-Surgical Nursing which included approximately 40 hours experience in Operating Room. The G.P.A. of the two groups was comparable; the first group average was 3.37 and the second 3.305.

Objective:

The objective was to measure the teaching effectiveness of a programmed text. The more specific objectives were taken from the text as listed by Marie M. Seedor. The teaching objectives was to increase the student knowledge of Asepsis.

Design:

The students were given a pretest soon after the beginning of the quarter. Then each student received the book *Introduction to Asepsis* to study for three weeks. This then was followed by a post-test and the results compared.

Evaluation Devices:

The written pretest and post-test was the evaluation tool used.

The criterion test for evaluation was supplied from the faculty at the University of New Mexico. It was thought perhaps a geographic and school comparison might be interesting.

Conclusions:

The results were not satisfying, with the first group of students doing better than the second group. Out of 63 questions the average pretest questions missed by the first group was 25.85. the post-test score was 22.57 making a gain of 3.28 or 5%. In the second group the pretest average was 24.78, with 22.85 in the post-test, making a gain of 1.93 or 3.1%.

1. It seems to be apparent that unless the students receive a grade for the material to be studied, they are not motivated for self-study.
2. During the Medical-Surgical experience apparently the principles of Asepsis are not being reinforced in a meaningful way.
3. Student practice was limited in some cases of asepsis, e.g. cleaning and sterilizing of instruments, terminally cleaning a patient's room.

Problems Encountered:

Actually there were none. However, students were not motivated to study the assignment work for which there would be no grade, so, therefore, did not take the time to study the home assignment, even though he thought it valid material.

Possible Solutions to Problems:

In considering this method of instruction for future use, it is felt that it would be wise to quiz the students at frequent intervals, using demonstration and practice of Medical-Surgical Asepsis. The student would then be graded on the material.

Ideas for Further Study:

To use this method of teaching Medical-Surgical Asepsis in the Fundamentals of Nursing during the first clinical quarter. To identify areas in clinical practice where the student can apply these principles.

DEVELOPMENT OF PROGRAMMED INSTRUCTION FOR NEUROLOGICAL NURSING

Junior Level Students in Medical-Surgical Nursing

Lois Burnett **Loma Linda University**

Introduction:

The purpose of this project was to develop a unit of programmed instruction dealing with nursing care problems of a patient with increased intracranial pressure. The unit is intended for use as a part of the instructional content in Medical-Surgical Nursing for Junior students in a university school of nursing. These students will have completed courses in the basic sciences during the first year of college. Advanced physiology will be given during the junior year. The students will have completed Medical-Surgical Nursing I.

Objective:

The overall student objective with which the planned program instruction would be concerned was: to acquire ability to give nursing care to a patient with increased intracranial pressure — or to a patient with such a potential — which is based on an application of the underlying physiological principles. The specific subobjective with which the programmed instruction would deal was: To specify the physiological changes which result in an increased intracrainial pressure as a consequence of activities of the patient, or as a consequence of nursing activities for the patient.

Design:

Concepts derived from selected literature will be used as the source for writing of the frames for the programmed instruction and subsequently for the development of questions for a pre- and post-test. The content of the programmed unit is intended to be basic to an understanding of the nursing problems of patients with intercranial space — occuping lesions, trauma and infections. It will be concerned with teaching the physiological principles related to an increase of intracranial pressure as a consequence of a patient coughing, choking, crying, vomiting, sneezing and straining at stool. The unit will be presented following a review of the anatomy of the brain by means of a two-hour brain-cutting lecture-demonstration presented by a neurological pathologist, and a one-hour classroom discussion for the review of the anatomy and physiology of the nervous system.

Instruction in the clinical laboratory will provide for the student subjects immediate opportunity for the application of content in the nursing care of patients with increased intracrainial pressure or with this potential.

Evaluation:

After writing a few frames, a tryout will be made on one individual. Errors will indicate need for revision. Tryouts will be repeated on all frames until there are no errors. The revised unit will be administered to the selected students.

One test of approximately 50 multiple choice items will be prepared for use as both pre-and post-test. From the test results the "Actual Gain" and "Gain Ratio" will be determined in connection with the programmed instruction unit. It has been indicated that a "Gain Ratio" of 0.50 would be a very good outcome for evaluation of programmed instruction. The higher the score above 0.50, the better the outcome.

Problems:

It had been anticipated that a previously prepared programmed instruction course could be obtained, but the one considered was not as yet available.

Future Plans:

1. Complete the pre- and post-test.
2. Administer the test to the selected students.
3. Develop frames sufficiently to cover test items, if satisfactory test items canot be secured elsewhere.
4. Evaluation according to plans outlined.
5. Use of a programmed instruction of neuroanatomy now being developed by another person.

NON-VERBAL COMMUNICATION PROGRAMMED INSTRUCTION

Carolyn E. Carlson
University of California at Los Angeles

Introduction:

Communication has gained increased recognition as an important concept in nursing. This is exemplified in the more recent nursing literature and in nursing curricular change. Nursing educators are faced with the task of finding effective methods for teaching the various aspects of communication.

Student experience difficulty in learning the significance of non-verbal communication; therefore, they have difficulty observing and describing non-verbal cues.

Development of a Programmed Instruction Tool

The writer has attempted to develop a teaching tool for the purpose of facilitating this learning of non-verbal communication. Programmed instruction was the method chosen for constructing the tool because it allows the student to: 1) progress at her own rate according to her ability, 2) continually be aware of her progress, and 3) be tested frequently so that if learning were not occurring, it would be known.

The program is based on the premises that all non-verbal behavior is meaningful. Thus, anything that can be observed in another person is capable of communicating something. Even the smallest wrinkles of the brow or the direction of lines around the mouth consciously or unconsciously communicate something to another person if they are observed. In order to make use of the more subtle non-verbal cues in interactions with others, it is necessary to be aware of them. Only when cues are consciously observed by another person can meaning for the cues be discovered. To communicate the meaning of non-verbal behavior to another individual, it is necessary to be able to describe non-verbal cues.

Objectives:

The objectives for this programmed instruction tool on non-verbal communication were as follows:

At the completion of this program the student will:

1. Define non-verbal communication as any human behavior that is observed and does not involve words. Students may use their own words; however, the elements of behavior, observed and absence of words must be included.
2. Define non-verbal cue as something that one observes that helps one to go about problems solving or as a hint that helps one to discover the meaning of behavior.
3. State the three major sources for non-verbal cues of the face, hands and total body.
4. Classify non-verbal cues that a person in a picture is givnig within each of the three major sources. (Criterion for classification was concurrence with expert opinion.)

Progress to Date:

Pictures were selected to illustrate the non-verbal cues presented in the program and also to test the student's ability to identify and describe accurately the non-verbal cues.

Non-verbal cues were divided into three general categories in the program to facilitate study: Facial, hand, and total body cues. Each category was considered separately in the program and was divided into smaller areas of cues. For example, the facial cues were divided into cues of the: 1) hair and forehead, 2) eyes, 3) tthe nose and mouth, and 4) general cues of the face. Following a discussion of the cues of one area, a picture of that particular area was shown to illustrate the cues. Then, another picture of this area was shown for the students to identify and describe the cues. This was the procedure for all three categories of non-verbal cues. At the end of the program, two pictures of people were shown and students were asked to identify and describe all of the non-verbal cues that had been presented in the program.

The program takes approximately two hours. It has not yet been tested on the junior nursing students for whom it was designed. A group of these students will take the program in the fall, 1964. It will be evaluated at that time.

The program was presented to thirty-six nurses at "The Nurses in the College Health Service" workshop in Los Angeles in June. The participants had various levels of education. A systematic evaluation was not attempted at the workshop. At this stage of development, the writer was primarily interested in subjective reactions to the teaching method, the content of the program, and in mechanical difficulties of presentation.

Conclusions:

This group generally found the program to be extremely interesting, useful for nursing, enjoyable and well presented. Some individuals would have liked more direction prior to beginning the program. Also, there was difficulty viewing some of the pictures from the back of the room and writing answers in a dark room.

Proposed Evaluation of the Program:

All things considered, the program seems to be worthwhile. Suggestions will be incorporated and the program will be tested in the fall. Two tests, including questions and pictures, will be developed and administered to two groups of students: one group that has taken the experimental program, and the other group that has studied non-verbal communication through present methods. One test will be used as a pre-test and the other as a post-test. The test results will be subjected to a statistical analysis of variance. The analysis will be by: 1) instructor, 2) test order, and 3) instructional method.

EVALUATION OF THE PROGRAMMED TEXT—ARITHMETIC FOR NURSES—IN A BACCALAUREATE PROGRAM OF NURSING

Sophomore Level Nursing Students

Annette Ezell **University of Nevada**

Introduction:

The research question was: "Can a student accurately calculate correct drug dosages upon completion of the programmed text, *Arithmetic for Nurses?*"

Programmed instruction text used:
(Ferster, Marilyn B., *Arithmetic for Nurses,* Springer Publishing Company, New York, 1961.)

The programmed instruction text was integrated into Nursing 210 — Maintaining Health in the Life Continuum, Part I. This was a five credit course taught during the first semester of the academic year to sophomore nursing students. This program, as designed by the author, required approximately 15 hours for completion.

Objectives:

To determine the learning of students using the described programmed text. The student objective was: Given a problem or situation involving the computation of quantities of drugs to be administered, the student accurately calculates the correct dosage.

To attain this broad objective, the student must adequately meet the following sub-objectives:

a. calculate fractions;
b. calculate decimal fractions;
c. change fractions and percentages into ratios and vice versa.
d. convert Arabic values to Roman numerals.
e. transfer numerical weights and measures from the Metric to the Apothocaries' System, and vice versa.
f. solve problems by proportions in dosages, solutions, and temperature conversions.

Design:

The sophomore class of 24 nursing students (male and female) were given the assignment for the programmed instruction during the middle of the Fall semester. A sheet of instructions were distributed to each student and a discussion followed. Students were encouraged to ask for individual conferences whenever they needed them.

Evaluation:

Two similar paper and pencil test forms were designed to evaluate the stated objective. During the pre-testing, twelve students received Test Form A, and the remainder received Test Form B. This process was reversed during the post-testing. All testing was done at one time. Post-testing occurred six weeks after initiation of the program.

Conclusions:

The evidence suggested that sophomore students showed a marked increase in their ability to calculate dosages as determined by criterion instruments. However, there were a large number of errors made by students upon completion of the programmed text. Additional learning experiences were necessary to achieve the level of performance required in the nursing program. A one-to-one relationship between student and instructor was necessary to supplement the programmed material. This particular program did not assure attainment of the requisite level of competency established in the overall objective for all students. However, the program didi achieve the objective for some students.

It must be concluded that the program, *Arithmetic for Nurses,* aids all students in learning some of the sub-behaviors measured by the criterion instruments; but that additional individual instruction is required to attain the broad objective. Many students who have completed the programmed text *could not* accurately calculate correct drug dosages.

Problems:

1. Six weeks appeared to be a prolonged period of time between pre- and post- testing.
2. Students expresesd dislike for "factoring" in the programmed text.

Possible Solutions:

1. Pre- and post- test at closer intervals.
2. Plan group discussions regarding "factoring."

INTERPERSONAL RELATIONSHIP IMPROVEMENT

Junior Level Students in Medical-Surgical Nursing

Estelle Gallegly **Stanford University**

Introduction:

Nursing education faces a formidable challenge. While the growth of knowledge has proceeded at an almost geometric rate and has produced more information, more skills and more experience for inclusion within the nursing school curriculum, there has been an increasing pressure from society and from the profession to maintain the traditional limits of time for the educational process. Indeed, there have been attempts to reduce the over-all time required for the education of a nurse. Somewhere, somehow, these competing forces must be resolved in such a way as to maintain high educational standards.

Selection of the Human Development Institute program "Relationship Improvements" was based on the following assumptions:

1. Knowledge of the basic principles of interpersonal relationships is an integral part of the educational preparation of the nursing student.
2. The ability to apply principles of interpersonal relationships in specific situations is essential for the effective functioning of the nursing student.
3. Ability to apply the principles of interpessonal relationships may stimulate changes in behavior in the direction of personality growth and improved relations with others.

Objectives:

1. Administration of the program "Interpersonal Relationship Improvement" to a group of students at the beginning of the first of two quarters of Medical-Surgical Nursing.
2. Evaluation of the effectiveness of a programmed text on interpersonal relationships as a teaching method.

Design:

1. Participants were third year nursing students at a private university, in the second quarter of the first year of a three year major in nursing.
2. Selection of Teams: Ten students participated in the project on a voluntary basis. Teams of two students were selected by random choice by the director of the project; five teams participated.
3. Length of time involved in the completion of the program: Two one-hour sessions each week for five weeks; a total of ten hours per team or 50 hours for the whole group.
4. Each student was responsible for the completion of the text within the assigned period of time.

Evaluation Devices:

1. Check list designed to test the effectiveness of the individual frames and sessions of the program.
2. Opinionnaire to be completed by each student at the conclusion of the program.
3. Individual conference with the director of the project.

Conclusions:

(based on student opinionnaire and conferences.)

1. Learning tends to occur more effectively in situations where the learners derive feelings of satisfaction.

2. Transfers of learning or generalization occurs where the learners recognize similarities and dissimilarities between past experience and present situations.
3. In a given situation interpersonal relationships depend on what is preceived by the individual.
4. Behavior change requires active learner participation.
5. Exploration of the interactions which occurred between the participants of the project increased awareness of the unexpressed feelings of others and of the methods by which more open expressions of feelings might be incresased.
6. Programmed instruction provided the nursing students with opportunities for guided practice in the application of the principles of interpersonal relationships in specific situations.
7. Analysis of the check list indicated a high correlation between the stimulus and the expected response in the individual frames and in the sessions of the text.

An additional value of the participation of the nursing students in this project was a better integration of the individuals into the group; improved interactions among the participants with their peer group, with their patients and with other nursing students.

Programmed instruction represents a new break through in learning methodology. Because of the need to cover so much material in an increasingly limited time, yet provide for individualized assistance to develop student potentials, such an instructional approach is particularly suited for nursing education.

Problems:

1. Cost of the program selected for the project.
2. Late administration of the program: learning experiences for the students probably would have been more meaningful if placement of the program has been earlier in the total curriculum — that is, if the program had been administered during the first five weeks of the first quarter of the nursing major.
3. The attitude of the faculty towards the use of a programmed text concerned with the teaching of interpersonal relationships lessened the enthusiasm for the project.
4. The small number of students participating limited the evaluation of the program as an effective teaching method.
5. No pre-post tests could be developed before the administration of the text because of time limitations.

Recommendations:

1. Pre-post tests must be developed to provide valid evaluative tools.
2. Content of the program should be focused on patient-nurse interactions to provide the most meaningful learning experience for nursing students.
3. Administration of the text should be in the first five weeks of the first quarter of the nursing major.
4. The program should be used in conjunction with group discussions focused on specific student-patient experiences.
5. Orientation of the faculty to the concept of the use of the programmed text as an effective extension of available teaching methods.

TEACHING OF AN INTRODUCTION TO ASEPSIS BY PROGRAMMED INSTRUCTION

Sophomore, Junior and Senior Level Nursing Students

Marilyn J. Hanna **University of New Mexico**
Virginia S. Jackson
Jeanne Creagh
Assisted by: Faith Jensen
Mary P. Simmons

Introduction:

The recent, simultaneous explosion of population and knowledge has produced effects which call for changes in education and at the same time make these changes possible. Educators in every field are faced with the same problem: How to teach increasing numbers of students more facts, principles and skills, and yet do so more effectively and efficiently. New teaching techniques, based on recently acquired knowledge of human behavior, have been developed and tested by psychologists and other experts. What is now needed in order to develop them into familiar tools for all to use is broad testing in the field where the average teacher works.

Some of the most impressive findings in new media indicate the effectiveness of programmed learning, at least in the area of learning factual information. Many programs now exist which can be and are being used. Many more could be developed if teachers want them. Only a few programs are available to nurse educators, and the authors were able to find very little published data on field testing of those which are on the market.

One test by the author of the programmed text, *Introduction to Asepsis,* is reported in the nursin literature.[1] She found that a gain in achievement between pre- and post-test performance was greater for the "teaching machine" group than for the group who had regular classroom instruction. She concluded that since "students learn as much from the programmed instruction method as they do from conventional classroom instruction that it seems more sensible to use the teaching machine if only to relieve some of the time pressure on both instructors and students."

Objective:

The availability of this text and the report of its testing provided us with the opportunity to use it with our students and compare our results and conclusions as well as make recommendations as the results of our experience.

Design:

The internal and external features of the program were examined. Internal features are defined as those which can be determined by visual inspection, i.e., type of program, form of objectives, content, and whether or not the program adheres to psychological hteory upon which programming is based. External features answers the questions:

1. Does the program teach what it proposes to teach?
2. What are the sources of the content material?
3. What are the qualifications of the teacher (programmer)?

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[1] Seedor, Marie M., "Can Nursing Be Taught with Teaching Machines?" *The American Journal of Nursing,* 63 (5) p. 120, May 1963.

4. Is the presented material in accord with the educational objectives of the user?
5. What is the reaction to the program by students and teachers?

Seventy-two students, including sophomores, juniors, and seniors, participated. A pre- and post-test was given and the ratio of gain/total possible gain was calculated.

Conclusions:

The main gain ratio of 27 sophomore students was 46.5% ; of 19 junior students 52.2% and of 26 seniors was 34.4%.

Student comment was roughly divided equally between favorable and non-favorable comments.

Teachers felt that while the text could be improved, it is worth using on the sophomore and junior level. They would not recommend using it as a review for senior students unless the clinical area provides opportunity for practice.

No correlation was found between the student's grade point average and gain ratio.

Recommendations:

1. Improvement of the program.
2. Additional studies using various methods of presentation to determine the most effective technique.
3. Studies to identify the factors which motivate student learning with this technique.

SELF INSTRUCTION PROGRAM IN THE PREPARATION OF DRUGS FOR INTRAMUSCULAR INJECTION

Planned for Sophomore Level Students in Medical-Surgical Nursing

Yasuko Hee **University of Hawaii**

Introduction:

"Teaching machine" and "programmed learning" are familiar words but many nursing educators never seriously investigated the most appropriate use and possible effects of this instructional method. The technique may appear too simple for use in professional education and not of the type a scholar would want to become involved in, but the extensive use being made of the technique by other disciplines suggests that it be evaluated for use in nursing education.

It is true that each year there are 1) an increasing number of students, 2) students of various levels of maturity, 3) more academically able students, 4) seemingly increasing content area to cover in available time, and 5) more behavioral objectives are expected to be met by the end of the course.

If one could successfully program an area in medical-surgical nursing that would meet the needs of this faculty it would indeed be very helpful. Thus an attempt was made to program an area, though just a small section, in pharmacology. Integration of pharmacology has been an area of concern and neglect since it ceased to be taught as a separate course.

To limit this project to the scope of the writer, an area was selected that was concerned with the preparation of a drug for administering by the intramuscular route.

Objectives:

Only those student objectives which were considered essential for the basic understanding of the contents were included. These were:

1. Know what a drug is.
2. List 4 areas of consideration when selecting a route of drug administration.
3. Explain the two major differences between the action of an intramuscular injection and the oral route of drug administration.
4. Name the 3 sites that may be used to inject a drug into the muscle tissue.
5. List all equipment necessary to administer an intramuscular injection.
6. Assemble from among all instruments in the storeroom those necessary in the preparation of drugs for intramuscular injection.
7. Identify the instruments (or parts of an instrument) that must be kept sterile.
8. Explain the precautions that must be observed by a nurse in order to avoid contamination and infection when preparing an intramuscular injection.
9. Prepare 2 cc of solution from a vial using proper technique for intramuscular administration of a drug.

Design:

Appropriate panels were used. All instruments necessary in the preparation of a drug by the intramuscular route were labelled and placed on the display shelf in the laboratory. In addition to this a similar set was also prepared to be given to each participating student so that she would be able to continue the lesson at home.

Frames were constructed for each objectives. Each item was typed on a 3 x 5 card. Two students from the freshmen class, picked at random, participated in testing this phase of the project.

Students' responses to each frame were studied and adjustments made in the frames. They were then written in booklet form with total frames consisting of approximately 230 items.

Three students picked at random from the freshmen class, participated in the final testing of the project.

Evaluation Devices:

Two pre-tests: first, a paper and pencil test requiring listing, defining, and short answers for those behaviors that could be evaluated by this means; second, a check list was devised in order that instructors could obtain consistent observation of a student's skill.

A post test, comparable to the pre-test, was prepared to evaluate the paper and pencil behaviors. The same check list was used to evaluate skills for a post instruction test.

Conclusion:

The three students completed the program in a week. Students were very enthusiastic and thought that this was fascinating and beneficial way to learn. They did not feel "pushed" but on the other hand they did not procrastinate either. They seemed to enjoy their independence.

Although frames seemed crude, empirical testing appeared to reveal that the participating students satisfactorily met the objectives set for this part of the course.

Pre-test mean score = 10
Post test mean score = 44.33
Maximum gain possible = 37
Actual gain = 34.33
Gain ratio = .93

Problems:

1. Construction of frames.
2. Built-in errors in the check list.

Possible Solutions to Problems:

1. Objectives were reviewed in relation to frames and test items. Adjustments were made.
2. Check list revised.

Ideas for Further Study:

The program, as it is now, is not suitable to be implemented in the program at the University of Hawaii.

1. Existing frames will require further refinement.
2. More objectives will have to be included before the program can take the place of the content now stressed in the course.
3. Frames that appear to be too elementary will have to be studied further.
4. Revised program must be tested on sophomore students.
5. How to get the benefits of class discussion in a program is an area that needs to be explored.

MATHEMATICS FOR DRUGS AND SOLUTIONS

A Study of Programmed Instruction
Beginning Clinical Nursing Students

Vera Koehler **Sacramento State College**

Introduction:

This project was derived from the writer's observation that collegiate nursing students have difficulty transferring and/or applying their knowledge of mathematics to the content area of drugs and solutions. Lecture-discussion presentation of materials have required more class time than the writer felt should be necessary on the basis of the students' prerequisite experiences in the curriculum pattern. The programmed text was developed (in collaboration with a colleague,) as a means of teaching this content more effectively and efficiently.

The setting for which this project was designed was that of a beginning clinical nursing course of two semesters. Students in the beginning clinical nursing course at the University of California, San Francisco, were used to test the material. The programmed text was designed to teach the student the metric, apothecary, and household systems of drug measurement, equivalents between these systems. and usage of these systems in the preparation of oral medications, hypodermic tablets, injectable medications (liquid), drugs measured in units, drugs packaged in dry form, and solutions.

Objectives:

The general objective of this programmed text was to provide a tool for the effective and efficient teaching-learning of the mathematics of drugs and solutions. When the student had completed the programmed text, the student should be able:

1. to write the conversions of equivalents within and between the metric, apothecary and household systems of measurement as related to drugs and solutions, and

2. to solve problems related to drug and solution dosages including the utilization of conversions of the metric, apothecary and household system.

Design:

This programmed text was used as an integral part of the nursing students' first clinical nursing course. Sections of the program were given to the students at intervals during the two consecutive semester course. The total program was divided in this manner so that the mathematical concepts preceded the lecture-discussion and clinical experiences dealing with the actual administration of medications.

Written directions for the use of the programmed text were included with each student's copy of the first section. It was believed that these directions were sufficiently explanatory, but opportunity was provided for answering students' questions. These programs were used out of class and arbitrary time period was established for completion of the sections of the programmed text.

Evaluation:

Evaluation of the program was carried out as follows:

1. a pretest consisting of fifty (50) multiple choice type problems directly related to computation of drug and solution dosages including utilizing conversions of the metric, apothecary and household systems was administered prior to any formal presentation of material within the programmed text *per se*. Each student's score was determined by the investigator. This pre-test constituted no portion of the student's course grade.

2. this same test was administered after the students had completed the total programmed text and this score constituted a small portion of the student's overall course grade. Measures of both gain and gain ratio were computed by the investigator for each student in order to determine the effectiveness of this program as a teaching tool. The gain ratio score provided a measure of how much was actually taught via the program as compared to how much could be possibly taught.

3. time spent in class dealing with the program was noted.

Results of the Study:

The gain ratio, as defined by Ellis, i.e., the ratio of gain actually achieved as companred with total possible gain, yielded the following evidence: On computing gain ratio scores, it was found that the mean gain ratio of the 71 students who participated in this study was 0.85, which means that the students learned 85% of what they could have possibly learned, quite a substantial gain.

1. The gain ratios of the seventy-one (71) students who participated in this study ranged from 0.57 to 1.00.

2. Twenty-four percent (24%) of these students achieved a gain ratio score of 0.57 to 0.79.

3. Seventy-six percent (76%) of these students achieved a gain ratio score of 0.80 to 1.00.

A gain ratio score of 0.5 was considered the baseline for determining whether or not a program is an effective teaching tool. It was concluded that this programmed text was a successful instrument for the meeting of the stated objectives.

One hour was allotted for the administration of the pretest. Twenty minutes were spent in the initial distribution of the first section of the programmed text. One hour was allotted for the post test. Students reported spending approximately the same amount of time using this text as other students had spent in the past with other materials. This text then was considered to be an efficient use of teacher-student contact time. Overall inspection of the pre- and post-test items revealed that the test was quite sensitive.

In light of the success of this program as a teaching tool, the writer would suggest that further studies investigating the development and/or utilization of other programmed materials in nursing would be indicated.

PROGRAMMED INSTRUCTION UNIT ON TRACTION

Sophomore and Junior Level Students
Medical-Surgical Nursing

Marlys Lilleskov
Mary Fenlon
San Francisco State College

Introduction:

The objective of the authors was twofold. First, we wished to gain experience in writing programmed instruction, and second, the writers recognized the need for material such as this in nursing. There seemed to be many areas where students demonstrate variations in their ability to learn facts. This could be due to differences in science and general education or differences in past experiences in terms of practical application, as in the case of some students employed in hospitals as nurses aides, or due to other factors. From past experience, it seemed that this was true in the area of traction. We felt that programmed instruction might be of value here as it would allow some students to proceed rapidly while others could work at their own rate.

Objectives:

The objectives for student learning were:

1. To define traction.
2. To state the purpose of traction in common orthopedic conditions.
3. To state conditions (health problems) where traction is used.
4. To state the major differences between skeletal and skin traction.
5. To name two methods of providing skeletal traction.
6. To recognize skeletal and skin traction.
7. To state the major differences between balanced and straight (running) traction.
8. To recognize balanced and straight traction.
9. To state why counter-traction is necessary.
10. To describe two methods of providing counter traction.

Design:

A programmed unit on traction, consisting of approximately 100 frames, was constructed. This program was first given to a class of 30 students enrolled in Medical-Surgical-Psychiatric Nursing (Nursing 140), at San Francisco State College. The students were in the sixth semester of the program and all had the same amount of clinical experience as professional nursing students. Participants had the same opportunity for practical application of the material in the clinical setting.

Students were given the program to supplement other classes in the unit "Problems of Locomotion." These classes were either teacher-led lecture-discussion classes or student-led discussions concerning patients' needs. The general focus of the unit related to the adaptions made by the musculo-skeletal system as a reaction to stress. The program on traction was given to the students during the second week of the unit. The students were told that although class discussions may focus on patients being treated by traction, the material of traction included in the program would not be a major point for class discussion. Instructions were given in the use of the program, which was an "outside of class" supplement. The students were given three weeks to complete the program.

In conjunction with this unit, the students were given a reference list of current articles in nursing publications. These references did not relate specifically to traction, but to nursing care of patients with common orthopedic conditions. In addition to some assigned readings, the students were advised to select from the reference list additional articles relating to the specific patients for whom they were caring.

In the clinical laboratory, learning experiences were selected so that each student would have an opportunity to care for or assist with the care of a patient in traction. No attempt was made to control or limit the type of traction. (Clarification of principles of traction or supplementary discussion of care of patients in traction was conducted in the clinical setting as the need arose.)

The programmed unit was revised and then given to a class of 23 sophomore nursing students at San Francisco State College. The nursing material covered in this semester for the sophomore group dealt with general care of surgical patients. One class period was spent in discussing surgical patients with orthopedic problems and at this time the pre-test was given and then the programmed unit on traction distributed. They had one week to complete the program, then the post test was given. Unlike the first group, there was no planned opportunity for caring for patients in traction. No supplemental reading was required.

Evaluation Devices:

Evaluation of achievement of both groups was done on the basis of pre and post test scores. (the same test) A comparison was made of the amount of knowledge gained and the total possible gain. The pretest was given immediately before giving the students the programmed unit and the post test was administered at the end of the unit along with the scheduled unit examination for the first student group. For the second group the test was given immediately after finishing the programmed unit.

The evaluation tool consisted of 10 multiple choice questions relating to the behavior and content specified in the objectives. Diagrams were used to test objectives relating to recognition.

The students were requested to write their response in the programmed unit and not to erase if they gave an unexpected response. The programmed units were returned to the instructors. Those areas where the student had not given the expected response were revised.

Conclusions:

The investigators feel that general results of the study show that programmed instruction probably has a place in the nursing curriculum if it is made an essential part of the learning experience. The particular program used needs revision and expansion in order to be an effective teaching device.

Problems Encountered:

In writing, obtaining necessary consultation and revising the material in the construction of the programmed unit, the problem of finding sufficient time was always with us. It is the feeling of the writers that the pre and post test may be somewhat inadequate but perhaps with the partial solving of the time problem we may realize our hope of revising and strengthening that test before it is again administered.

Ideas for Further Studies:

We would like to expand the same unit to include Russell's traction. With this revision, and revision of the testing device, we plan to use this again in the coming year.

PROGRAMMED INSTRUCTION ON THE NURSING CARE OF PREMATURE INFANTS

Junior Level Students in Premature Nursery
Maternal and Child Nursing

Betty Jane Loge
May I. Bruner
Arizona State University

Introduction:

The purpose of this project was to:

1. Construct a unit of programmed instruction on the nursing care of the premature infant.
2. Present this method of instruction to nursing students.
3. Evaluate the effectiveness of porgrammed instruction as a teaching technique to junior nursing students enrolled in the course, Maternal and Child Nursing.

The premature nursery was selected as the area for trying out programmed instruction for the following reasons:

1. It was a short clinical experience with rather clearly defined objectives.
2. Lecture time allocated to nursing care of the premature infant was limited. Therefore, a self-teaching method was selected.
3. Conference space was inadequate so much of the teaching that normally should be done in the classroom was conducted in the premature nursery.

Of the twenty-two students in the junior class, eighteen were able to participate in the project. The other four students had completed premature nursery clinical practice before the programmed text was completed.

Objectives:

The student nurse, through the use of programmed instruction, shall know the characteristics and physiological handicaps of prematurity and methods of premature infant care for the purpose of transferring the knowledge and applying it to the clinical setting of premature infant care.

In terms of behavior the student would be able to:

1. write the present criteria for defining prematurity.
2. list five factors that might prevent premature birth.
3. identify five physiological handicaps of premature infants.
4. write measures necessary to assist the premature infant to meet problems due to five physiological handicaps.

5. list reasons why preparation for discharge of the premature infant from the hospital is necessary and how it is accomplished through parent education.
6. discuss a resource available to the premature infant after discharge from the hospital.

Design:

Two weeks prior to initiating the project a 55-item test designed to evaluate the programmed text was administered. This served as a pre-test of the students since they had received no instruction in the care of premature infants prior to the test. Following this, the programmed text was given to the project participants for self-study in groups of four at staggered intervals over a two-month period. Preliminary orientation on how to use the text was included. The students did not receive any classroom instruction, and were instructed not to use other sources when using the programmed text. Upon completing the programmed text and prior to entering the premature nursery, the 55-item test was given as a post-test, and a gain ratio was determined.

Evaluation Devices Used:

To determine the effectiveness of the programmed text a 55-item multiple-choice test was constructed. Pre and post-test scores were used to calculate the ratio of gain.

In addition, a rating scale was used to determine student's reactions to the programmed text.

Conclusions:

The following conclusions were derived:

1. The programmed text was an effective teaching tool, as evidenced by the mean gain ratio of 0.719.
2. The majority of the students were in favor of using programmed instruction as evidenced by their responses on the rating scale.
3. The three instructors involved in teaching and supervising students in the clinical area felt that programmed instruction led to improved teaching since it necessitated defining the objectives and critical examination of the course content.

Problems and Possible Solutions:

Programming takes time. For a working teacher the time needed for writing a program is limited.

Faculty who teach on an academic year basis could be placed on a calendar year with the stipulation that summer months be used for programming, or arrangements might be made to relieve faculty from teaching responsibilities in order to program.

Further Studies:

The following are ideas for further studies:

1. To use the programmed text in the future for the purpose of further refinement and evaluation.
2. To consider the use of programmed instruction in other areas of Maternal and Child Care Nursing where a body of knowledge is specific and identifiable. (For example, newborn nursery and communicable diseases of children.)
3. To investigate areas in our total curriculum where programming might be used. Once having determined the area it would be necessary to find

out what programs are available or, faculty might be encouraged to program their own text. Evaluation of the program should be part of the overall plan.

A STUDY OF THE EFFECTIVENESS OF THE GENERAL RELATIONSHIP IMPROVEMENT PROGRAM THROUGH ITS USE WITH A SELECTED GROUP OF STUDENTS IN NURSING

Senior basic degree nursing students — Medical-Surgical Nursing Post-Baccalaureate students (Deficiency for entrance into graduate program.) Functional area — Administration

Margaret Pluckhan **University of Colorado**

Introduction:

Because of the increasing complexity of the role of the professional nurse, the need for more effective and efficient teaching methods is particiularly urgent in the field of nursing education. Programmed instruction appeared to be one way by which the learing process could be enhanced since it is based upon principles of learning and behavioral techniques and involves an application of behavioral control techniques.

The problem of the study was to ascertain the effectiveness of *The General Relationship Improvement Program*[1] in increasing the knowledge and understanding of a selected group of nursing students of principles of interpersonal relationships.

Interpersonal relationships are an integral and focal area of content in the two senior level courses, Nursing 432-3, Team Nursing and Ward Administration Practice, and Nursing 433-3, Principles of Administration Applied to Nursing Care. It, therefore, appeared appropriate to evaluate the effectiveness of an already published program, *The General Relationship Improvement Program*[2] since this program was specifically designed to increase understanding of interpersonal relationships and to create experiences which enable the student to be better prepared to take advantage of growth producing relationships.

Objectives:

The purpose of the study were: (1) to determine the effectiveness of one published program in helping students develop knowledge and understanding of the principles of interpersonal relationships, (2) to give a selected group of students an opportunity to experience a particular program of instruction as a teaching method, (3) to ascertain student opinion of the effectiveness of programmed instruction as a teaching method and, (4) to obtain the opinions of a selected group of students regarding the method of conduct of this particular program.

Design:

After permission to conduct the study and purchase two of the programs was obtained, it was necessary to design tools to evaluate the effectiveness of the program. The initial tool — a pre-test — was developed. The pre-test was administered to thirty senior basic degree nursing students who had completed Nursing 432 and Nursing 433. The pre-test, which was comprised of sixty multiple choice questions with five distractors each, was then subjected to item analysis of the distractor answers. After the analysis was completed, minor changes were made and the pre-test was approved for use.

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[1] Human Development Institute, Inc., *General Relationship Improvement Program,* (Third Edition), Atlanta, Ga., 1963.

[2] *Ibid.*

A student questionnaire was formulated. It was believed that one of the best ways to evaluate the program was to elicit student opinion of the programs' effectiveness. The rating scale for student evaluation of the Holland-Skinner Program[3] was used as a model.

Following the preliminary planning and development of evaluation tools, the study was initiated. A total of twenty-seven students participated in the study. Of these, twenty-two were basic degree students and five were post-baccalaureate students making up deficiencies. All were enrolled in Nursing 432 and Nursing 433.

The pre-test was administered initially. The students were then given the program which they worked in pairs. This involved two, one hour sessions, each week for five weeks. The Program was administered concurrently with previously established teaching methods. The students selected their own partners and the time each week to use the program. At the time all students had completed the program, the pre-test (utilized as a post-test), and the student questionnaire, were administered.

The analysis of data consisted of (1) determining the range and mean of the raw scores of the pre and post-tests, (2) determine the range and mean of the gain ratio, (3) determining per cent score of the pre and post-test scores, (4) determining if there was a trend toward significant different between scores obtained by the twenty basic degree students and the five post-baccalaureate students, and (5) tabulating the responses of the student questionnaires. As a means of determining if learning had persisted, a retention test was given. Because of the academic school year, it was only possible to administer the test to fourteen students. The data was treated as previously, and the range and mean of percentage of retention was computed.

Conclusion:

On the basis of the data obtained in this study, it was concluded: (1) The program was an effective means of increasing the knowledge and understanding of interpersonal relationships (the mean gain ratio of the population (N=27) was 0.50). (2) The program in concert with conventional methods of teaching appeared to substantially increase percentage of retention of learning (the mean percentage of retention after eleven weeks (N=14) was 92% with a range of 83% to 102%). (3) All students (27) believed the content of the program was worthwhile, about two-thirds (16) believed they were able to learn more with the program, and the majority (26) found working with a partner was very helpful.

Problems Encountered:

1. Scheduling of students.
2. Expense of the program.

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[3] Theodor F. Hausmann, "A Laboratory Experience in Programmed Learning for Students in Educational Psychology," *The Journal of Programmed Instruction,* Vol. 1, p. 15.

AN EVALUATION OF THE EFFECTIVENESS OF PROGRAMMED INSTRUCTION IN TEACHING COUNSELING TO STUDENTS OF NURSING

Diploma and Baccalaureate Students in Psychiatric Nursing

Florence A. Robinson **University of Oregon**

Introduction:

It is general knowledge that more than half the hospital beds in the United States are occupied by patients who need psychiatric care and that an unknown number of individuals hospitalized for non-psychiatric reasons have psychiatric problems. It is an accepted fact that nursing personnel come in contact with patients more than members of ony other discipline and that the professional nurse has the final responsibility for nursing care of patients. Since disturbances of a psychiatric nature are, to a great extent, problems in interpersonal relationships ; the professional nurse needs knowledge and skills in interpersonal relationships in order to work with patients and other members of the nursing team.

New knowledge in the behavioral sciences is being added to existing knowledge frequently. Nursing educators are becoming aware of the need and are assuming responsibility for setting up curricula from which student nurses can gain the knowledge and skills in interpersonal relationships necessary to relate to individuals regardless of the individual's level of mental health.

New methods of teaching seem necessary in order to help students gain as much knowledge and as many skills as possible in the time allotted to teaching and experience in psychiatric nursing in a basic nursing education program. There are indications in the literature that programmed instruction has been as effective as traditional methods of teaching. Once an effective program has been developed there is a saving of time for instructors and students can set their own pace for particular units of instruction.

The students who affiliated at the state hospital were from the three collegiate and the three diploma schools of nursing in the state. The backgrounds in the behavioral sciences varied from school to school and there was a variation in the amount of experience with patients withing the type of program. For example, schools A and C in the collegiate programs sent their senior students and school B sent their junior students on their psychiatric affiliation. The collegiate and diploma programs were separate after the fall quarter of 1963. During the quarter in which the collegiate students were included in the study all the students from the diploma programs were seniors. During the spring quarter of 1964 only students from the diploma programs were included in the study. It was during this quarter that schools A and B sent students in their second year.

Objectives:

The purposes of this study were (1) to determine by experimental means the teaching effectiveness of the program entitled *An Introduction to Counseling*[1] in teaching counseling to students on a psychiatric nursing affiliation and (2) to compare the achievement of students who had less theoretical background and experience with students who were in the senior year of their programs.

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[1] Della-Piana, Gabriel and Faye Ellison, *An Introduction to Counseling.* University of Utah, Department of Educational Psychology, Salt Lake City, Utah, 1962 (unpublished). The program tested.

Design:

Both groups of students were given the same instructions. It was explained to them that they were going to be given a program of instruction in counseling because the content seemed to be something which they could use in their relationships with patients. It was also explained that they would be given a pre-test and the same test after they had finished the program and that the post-test score would be included as part of their theory grade.

Since specific written directions were given with the program, a copy was given with each of the first lessons. The directions were read aloud as the students read along. They were given a class period to do the first lesson. They were told to do the remainder of the lessons at their own pace, on their own time, outside of class. When they turned a lesson in with their answer sheets they could take out the next lesson. The lessons were kept in the Nursing Education Office. They were also told that the post-test would be given two weeks from the day they did the first lesson and were given the date.

Evaluation Device:

Since a *Test of Knowledge and Application of Introductory Counseling Concepts and a Criterion Test* accompanied the program it was decided by the writer to give them as a pre-test and a post-test, except for those questions which asked the students to write out responses which a counselor should use in response to particular comments of clients.

Conclusion:

The results of this study show that all the students gained knowledge of introductory counseling concepts and developed some ability to apply them on a paper and pencil test.

In comparing post-test scores of students in programs in which there was variation in the theoretical background in the behavioral sciences, the mean scores ranged from 65.67 in school C of the diploma programs to 68.50 in school A in the diploma programs. This occurred during the quarter when all the students were in the last year of their respective programs except those in school B of the Collegiate programs.

The mean gain ratio scores in the total study ranged from .56 in school C of the collegiate programs to .65 in schools B and C of the diploma programs during the spring quarter of 1964.

These scores indicate that the students gained knowledge in inverse proportion to their backgrounds in theory in the behavioral sciences. Those who started the program with more theoretical background made lower gain ratio scores and those who had less theoretical background had higher gain ratio scores.

Problems Encountered:

One problem encountered was the lack of time for other faculty members to evaluate the program in light of the over-all objectives of the total educational program and the lack of time to develop a questionnaire to elicit student reaction to this method of teaching. Verbal comments in response to questions are the only indications of student's opinions. The comments were primarily positive.

In analyzing the data there was the problem of human error in figuring scores. There was no mechanical means of computing the scores available.

Possible Solutions to Problems:

Having more time to spend on the study and access to technical assistance for computing scores would solve the problems.

A STUDY OF THE USE OF PROGRAMMED INSTRUCTION FOR TEACHING ONE UNIT OF THE COURSE IN NURSING FUNDAMENTALS

Student Level: First Clinical Nursing Course

Sister Mary Fabian **University of San Francisco**

Introduction:

The course in Fundamentals of Nursing uses a broad-fields approach to the more common health problems of people in the hospital and community setting. The writer of this study was of the opinion that the background information which the student needs when caring for the aging patient could be effectively learned by the use of a programmed text for presenting the material covered by this unit.

The students for whom this program was designed were basic students in the third semester of a baccalaureate program in nursing conducted by the University of San Francisco. They have had one lower division course in nursing dealing with community health needs. This was their first nursing course experience in dealing with the nursing needs of the aging.

The problem was to develop and evaluate a unit of programmed instruction which would teach the student the physiological and psychological alterations due to the aging process and appropriate modifications of nursing measures required by these alterations.

Objectives:

The use of a programmed unit of instruction could serve a three-fold purpose in the school of nursing:

1. It could introduce students and faculty to a new method of teaching by a concrete demonstration of its use and effectiveness.
2. It could provide an effective and efficient way to meet student needs for principles from which she could derive solutions for problems in nursin care of the aged.
3. The programmed method seemed to provide a built-in assurance that the student would not only be exposed to the material, but that he would actively participate in the learning process and would be able to test his ability as he proceeded at his own pace toward specific behavioral objectives.

It was the hypotheses of the writer that the use of a program in basic nursing needs of the aging person would result in an increase of the students' knowledge of principles of nursing care which could be tested by a paper and pencil test and also by observing the behavior of the student as he demonstrates his understanding of these principles in the laboratory setting.

The objectives of this unit of programmed instruction were originally delineated as follows:

1. To identify the basic human needs under certain categories.
2. To recognize the physiological and psychological alterations due to the aging process which affect the approach to and the fulfillment of the basic human needs.
3. To be able to follow through on his recognition of alterations with appropriate modification of nursing measures and so to meet the basic human needs of mildly-ill elderly persons who cannot provide for their own needs.
4. To recognize the need of referring the patient to an appropriate social or welfare agency for continuity of care when the patient or his family cannot provide such care.

Design:

A program was developed based on Objectives 2 and 3 above. The inclusion of objectives one and four would have risked making the program too broad in scope and so unwieldy as to make it difficult to concretize and organize in a meaningful sequence for students at this level. It was recognized, however, that students would need to have a knowledge of the *basic human needs* before objective 2 could be presented in a program.

A list of the most obvious physical and psychological alterations and a related list of modifications in nursing were drawn up. This list was the basis from which the program frames were developed. A learning experience was planned for each student which would include:

1. Administration of a pre-test followed by the program and a post-test.
2. A clinical assignment to the care of a mildly-ill geriatric patient which would include at least three practice sessions. As part of this assignment, each student will be required to: a) develop a nursing care plan for the patient; b) report her observations of the physical and psychological alterations in this patient; c) prepare a written report of her nursing care and its rationale.
3. Criteria for the selection of this clinical assignment will be developed by the faculty in this area in order to insure that nursing are will require the application of the principles learned in the program.

The pre-test was developed and administered to twenty-six sophomore students who were already in the course of Fundamentals in Nursing, and who were presently engaged in caring for mildly-ill geriatric patients. The program was administered more as an initial field test for clarity of the frames than as a test of the value of the program itself. The knowledge and experience already acquired by the students who were at the mid-point of the course would invalidate any test results. The frames were revised on the basis of errors made by the students. Twenty-six Freshmen students without previous nursing knowledge or experience were then invited to participate in testing the program; twenty-three completed the program and the post-test.

Evaluation:

Evaluation of the effectiveness of the program in teaching nursing needs of the aging will be based on the following:

1. The gain scores and gain ratios as determined by the pre-test and post-test. The student will exhibit aceptable performance if she can recall at least 75% of the alterations studied.

2. In caring for the patient assigned to her for individual study the student will be able to:
    a) plan nursing care which indicates that she has identified the basic human needs at least in the broad categories given.
    b) report observations that give evidence that she recognizes the more grossly obvious physiological and psychological alterations in this patient.
    c) prepare a written report of nursing measures used that will give evidence that she based the rationale for care on principles derived from her study of the program.

Conclusion:

Since evaluation is not complete, no conclusions can yet be drawn. However, inspection of scores on pre-and post-test without any analysis of statistical data would seem to indicate that learning did take place. Of the twenty-three students who took the test, all but one showed an increase in the post-test over the number of correct responses made in the pre-test. One student showed a loss of two points in the post-test. Gain scores and gain ratios remain to be computed and interpreted.

Problems:

1) The original plan for using the program with students in the clinical area could not be fulfilled as it had been intended. By the time the program was ready for administration, these students had already acquired a working knowledge of the principles it embodies through other assignments.
2) The freshman students on whom the program was tested were an ideal group as far as lack of previous knowledge and experience was concerned. However, sine these students were not in the clinical area at the time the program was administered, there was no opportunity to follow through on all expected behavioral changes.
3) Pressures and demands of a full-time teaching schedule and other faculty committments prevented completion of the project within the time-span of the seminar sessions.

Possible Solutions:

1) The students were asked to prepare a report of their nursing care of selected patients after they had taken the program. Some idea of whether or not the program really teaches can be gained by analyzing the nursing care reports and noting the consistency with which students report the use of principles contained in the program. It should be possible to calculate roughly the degree to which other materials and intervening experiences influenced the results by checking course outlines, reference readings and student assignments to patients on the clinical area previous to the administration of the program.
2) Freshman students who took the program will begin the course in Fundamentals of Nursing in the Fall of 1964. A retention test an be given at this time and program repeated if the results of the test warrant this. The students an also be given the program to review on their own before they begin their experience on the clinical area.
3) The writer is motivated to complete the project and has been provided with the knowledge, skills and tools to do so. A final report will be submitted when all data has been analyzed and interpretation completed.

THE USE OF PROGRAMMED INSTRUCTION FOR TEACHING ONE UNIT OF THE COURSE IN PSYCHIATRIC NURSING

Senior Level Students in Psychiatric Nursing

Sister Mary Martha **University of San Francisco**

Introduction:

The increasing body of knowledge which confronts today's student makes it imperative that instructional methods be used which will provide the learner with effective and efficient tools for mastering basic material. One of the methods which appears to meet both of these criteria is that of programmed instruction.

The area of programmed instruction was selected for special study not only because the writer wished to gain some skill in the use of the method, but also because it seemed to offer the student an effective means of proceeding with learning at his own pace in an orderly and organized fashion and of checking what he had learned immediately and systematically.

The students for whom this project was designed were in the first semester of their senior year in a pre-service baccalaureate program in nursing. The students brought with them an experimental knowledge of group dynamics and of problem-solving in nursing. This was his first exposure to the concept of group psychotheraphy as a method of treatment in psychiatry. Heretofore, the material covered in this unit of instruction had been taugh by a combination of the following:

1) A list of required readings which the student was encouraged to supplement on his own from a bibliography provided by the instructor.
2) Observation of psychotherapeutic group sessions in a psychiatric outpatient clinic.
3) Post-session group discussions with the students, conducted by the psychiatric nurse instructor and the patients' group therapist. The latter was always a psychiartist or a psychologist.

The problem was to develop a method of teaching basic theoretical concepts of group psychotherapy whih would provide the student with an opportunity to participate actively in the learning experience and to be constantly aware of his rate of progress toward his goals.

The rationale for this project was based upon the following factors inherent in the present method of teaching this phase of the course:

1) The broad theoretical scope of group psychotherapy makes it difficult for the instructor to focus on pertinent material in assigning reference readings for students. Students who read widely without a previous core of knowledge can become confused by the many conflicting schools of thought within this clinical discipline.
2) It is essential that students come to the observation-discussion periods with at least a basic understanding of the rationale and methods of this form of psychotherapy.
3) Use of the lecture method for presentation of the material is time-consuming for both instructor and students, but it still does not involve the student in active participation to any great extent.

Objective:

The objective of this study was to determine the effectiveness of programmed instruction in teaching one unit of the course in psychiatric nursing.

It was hypothesized that required reference readings could be replaced by a programmed text on the theory of group psychotherapy. An organized, meaningful presentation of the material to which the student could respond actively and through which he could obtain immediate feedback as to his progress should provide a common baseline upon which to build further learning experience.

Design:

The setting in which this project is being carried out is the University of San Francisco School of Nursing. The clinical area is psychiatric nursing, taught in the Fall semester of each year. Two phychiatric nursing instructors are involved in two separate laboratory areas. The instructor conducting this project has two consecutive groups of ten students. The course covers an eight-week period; students are in the clinical area four days each week. Students elect their own class section so that each group of ten may be said to represent a random sample of the total class of forty. Only two groups of ten students has been selected for administration of the program in the Fall. All of these students have been enrolled in the University's program in nursing since their Freshman year, so that all have the same academic and professional background. Grade point averages range from 2.00 to 3.26 and CEEB scores range from totals of 834 to 1272.

A programmed unit of instruction in theory of group psychotherapy is to be administered early in the course. Prior to the administration of the program, students will observe one session of group psychotherapy conducted by a psychiatrist as part of his regular group therapy practice. Following this, a pre-test based upon the content of the program will be administered to all ten students. The program will then be given to this same group of students. Objectives of the program were derived from assumptions about the students as stated above and from the instructor's previous experience with determining the learning needs of students on this level. The aims of the school of nursing and the educational philosopy reflected in the total curriculum also influenced expected behavioral outcomes of the program. Objectives were stated as follows:

When the student has completed the program he will be able to:

1) Define each of a given list of terms relevant to psychotherapy.
2) Explain in his own words the difference between the five main categories of group psychotherapy.
3) Explain the three kinds of goals for group psychotherapy.
4) Explain a given list of mechanical factors to be considered for effective group psychotherapy in terms of their relevance to therapeutic outcomes.
5) Contrast advantages and disadvantages of group psychotherapy.
6) After observing a group therapy session, identify aspects of group process and check these observations against similar observations made by the instructor.

Existing literature on group psychotherapy was surveyed in order to develop an outline of content that would embody an empirical approach and reflect the most commonly accepted principles and theories in this field. The outline was submitted to the senior consultant in group psychotherapy for psychiatric residents in the clinical teaching program. The outline was then refined and revised. Programing of the material is in the process of being revised and completed. The first ten frames of the program were given to a group of sophomore students for testing and comment. Five students worked through each of the ten frames. There were four frames in which no errors were made. One error was made in each of four frames and one frame produced two errors. The highest number of errors in any one frame was five. In other words, all five students failed to respond as expected to the stimulus. All frames in which errors were made have been revised but not retested.

The program will be completed for use and testing during the Fall semester, 1964, when students are in psychiatric nursing. Revision, correction and refinement of the program and its evaluation tools will be done during the Summer.

Evaluation:

The proposed method of evaluation is the use of a pre-test and a post-test based on the program. These tests, yet to be developed, will be identical. Gain scores will be computed from the results of these tests and gain ratios worked out. Future revisions of the material and the program will be made on the basis of gain ratio; that is, if the mean gain ratio for the group is less than .50 the program will be analyzed, revised and re-evaluated. In addition to the paper and pencil tests, students will observe a group therapy session with the psychiatric nurse instructor and identify aspects of group process as demonstrated during that particular session. The degree to which students' observations agree with those of the instructor will assist in determing to what degree objective six has been met.

Problems:

1. Since the group involved in the project is so small, it will not be feasible to use a control group. The program will be administered to all ten students so that gain scores will show only whether or not the student has learned, but will not demontsrate whether or not this technique of teaching is superior to the existing method of teahing theory of group psychotherapy.

2. Psychiatric nursing is taught only in the Fall semester, so that it was not possible to complete this project within the time span of the WCHEN seminar.

Possible Solutions:

For the coming semester, the use of the program for all students will be adequate to compute gain scores and gain ratios and to revise the program on this basis. A project using a control group can be set up next year after the program has been field-tested and revised.

Further Study:

A number of ideas for further study suggest themselves, but whether or not they should be pursued will depend on the outcome of the present study.

EVALUATION OF TEACHING THE PHYSIOLOGY OF THE ENDOCRINE SYSTEM BY THE LECTURE METHOD

(Program to be developed later.)

Sophomore Students Associate Degree Program

Marjorie P. Sommers **Weber State College**

Introduction:

Medical and Surgical Nursing is taught throughout the sophomore year. There are three instructors who share in the teaching in the last three quarters. The subject matter has been divided according to systems and equally dividede to be taught by the three instructors. One of my systems was the endocrine glands. In the past, I have found that the students know very little about the physiology of the endocrine system. I believe that this knowledge is basic to any comprehension of the diseases of the endocrine glands.

Background of the students:

The students who took this course completed the following courses:

1. Anatomy and physiology
2. Dietetics
3. Chemistry I
4. Physics I
5. Basic Communications, I, II, III
6. Psychology I
7. Social Sciences 9 hrs.
8. Humanities I, II, III
9. Orientation to Nursing
10. Child Growth & Development
11. Maternal and Child Care
12. Medical & Surgical Nursing
    a. Psychiatry
    b. Pediatrics
    c. Medical Diseases
    d. Necessary Surgical Treatment — Pre & Post Op Care
    e. Medications
    f. Aseptic Technique

Objectives:

The problem I attempted to solve was to have the sophomore nursing students in an associate degree program meet the following specific goals after being presented with a pertinent group of facts pertaining to the endocrine system:

1. Identify and locate on a chart of the human body, all of the above listed glands.
2. Name the hormones associated with each gland.
3. List the functions of the aforementioned glands and hormones.

Design:

I prepared the unit of lectures on the endocrine system; it falls Spring quarter of the student's sophomore year. I gave the pre-test, the lectures and the post-test during class time. Twelve class hours were allotted to the endocrine system. The time was spent in lectures and class participation in order to cover the diseases of the endocrine system, a pre-test at the beginning of the time and a post-test at the close.

Project: Physiology of specific glands and hormones of the endocrine system. They are:

1. Pituitary gland
2. a. Neurohypophysis
    1. Pitocin
    2. Pitressin
  b. Adenohypopphpsis
    1. Somatotrophin
    2. Thyrotrophin
    3. Adrenocorticotrophin
    4. Gonadotrophin
2. Thyroid gland
    1. Thyroxin
3. Parathyroid gland
    1. Parathormone
4. Islands of Langerhans
    1. Insulin
5. Adrenal glands
  a. Cortex
    1. Glucocorticoids
    2. Mineralcorticoids
    3. Sex corticoids
  b. Medulla
    1. Adrenalin
    2. Noradrenalin

Evaluation:

There was a possible score of 100
Pre-test score 53.982 average correct
Possible gain 46.018
Actual gain 36.609

$$G = \frac{\text{Gain}}{\text{Possible gain}} \qquad \frac{36.609}{46.018} = .79$$

The results of this project point up the fact that this method was an effective teaching tool.

However, the lecture method does contain a great number of variables and I would still like to construct a program and measure it's effectiveness in the same manner this project has been carried out.

So my future plans are to finish construction of the program and complete the project which I originally started to do which was a program on the physiology of the endocrine system.

EVALUATION OF A PROGRAMMED TEXT IN ALLERGY AND HYPERSENSITIVITY

Sophomore Students in Medical-Surgical Nursing
Associate Degree Program in Nursing

Clarine I. Steil **San Jose City College**

Introduction:

To find a more effective way of providing experiences wherein the nursing student may acquire relevant facts and principles gleaned from supporting sciences which will enable her to more accurately assess the patient's nursing care problem, plan and initiate appropriate action.

The search is continuous for more effective techniques in teaching. For understanding to be functional, new material should be presented as a stimulus in such a way that responses are less likely to be inhibited by such intrusive inbuences as anxiety and time lapse.

Programmed instruction is designed to effect step by step progression in learning new material accompanied by "rewards" and reenforcement so as to provide satisfaction with learning and insure likelihood of internalization.

Research in the related biological sciences and therapy goes on at a rapid rate. The supporting background material acquired by the student should reflect newer concepts and findings.

My reason for using a program primarily intended for physicians was two-fold. First, a statement in the preface, "This kind of programmed review is not intended as a substitute for extended reading and study." Secondly, the material presented reflected modern research findings and contained relevant material from several science areas.

The students had completed the following courses in nursing:

Fundamentals of Nursing, Maternal and Child Health Nursing, and Mental Health Nursing. In the biological science area, they had completed Anatomy and Physiology and Microbiology. The students have been orientated to concepts of Antigen - antibody and allergen - antibody reaction in the course in cepts of Antigen - antibody and allergen - antibody reaction in the course in Microbiology.

Objectives:

To provide opportunity for the student to acquire a more complete, unified, and functional understanding of relevant scientific principles and facts pertaining to the care of patients with allergy and hypersensitivity reactions.

It was expected that the student would:

1. In pre and post conferences and class discussion identify:
    a. similarities and differences between allergy and immunity
    b. most common disturbed physiology accounting for manifestations of allergic and hypersensitivity reactions.
    tions.
    d. the nurse's role in the theraputic regimen.
    e. specific terminology.
2. Pass a unit examination consisting of multiple choice questions.

Design:

The programmed course, *ALLERGY AND HYPERSENSITIVITY*, 2nd edition revised, was used. This is a programmed course designed primarily for physicians self-study, and was developed by Basic Systems, Inc. in collaboration with Pfizer Laboratories' SPECTRUM. The Chas. Pfizer Company generously supplied the program booklets for the proposed study.

The course, "Care of the Adult" contained a unit concerned with "Care of the Adult Patient with Allergy or Hypersensitivity Reactions." It is planned to use the program in this unit.

Evaluation Devices:

I propose to use a pre and post test to assess the gain measure, including some item analysis of the test.

Conclusion:

At this point it is impossible to draw conclusions because the design has not been implemented.

Problems:

At present time, I would predict that a problem area might be in relating this scientific background material to the real nursing situation.

Possible Solutions to Problem:

One approach might be through group discussion initiated with and reinforced by pivotal questioning directed toward clinical application.

Because similar clinical experiences might not be available within a reasonable time span for all students, representative clinical experiences might be used as a focus for "dissection" and discussion.

Ideas for Further Study:

I would like to pursue the development of a tool for evaluation of performance in the clinical area centering around related behavioral objectives.

PROGRAMMED INSTRUCTION TO TEACH COMMUNICABLE DISEASE TECHNIQUE TO NURSING STUDENTS PREPARATORY TO CARING FOR CHILDREN WITH COMMUNICABLE DISEASE

Junior Level Students in Maternal-Child Care Nursing

Lucille B. Stewart **University of Washington**

Introduction:

The problems for study were:

1. Identifying what students already know about communicable disease technique is currently a problem. Some have had Nursing Fundamentals on a Comunicable Disease ward, others have worked there as aides. Their retention of material taught in the basic sciences varies also.
2. This wide variation results in unnecessary repetition for some and possible omission for others.
3. A great deal of instructor time is spent in identifying gaps in knowledge of asepsis and in teaching the principles of communicable disease technique.

It is believed that programmed material could be used to teach these principles. The student could progress at her own rate and instructor time could be better utilized in observing the students' application of learning in the patient care situation.

The program was used with 15 junior students in the baccalaureate program in nursing at the University of Washington. Previous nursing courses included Nursing Fundamentals, two quarters of Medical-Surgical Nursing and one quarter of Maternal-Infant Nursing. They were currently taking theory and practice in Maternal and Child Care II.

Design:

The plan was to use Marie Seedor's *Introduction to Asepsis, A Programmed Unit in Fundamentals of Nursing*, Chapter II, Section III, to teach the fundamental principles of communicable disease technique as preparation for the care of children with communicable diseases.

During the first week of the quarter, the students were orientated to the basic principles of child care. The problem of communicable disease care was introduced. A pre-test, consisting of 27 multiple choice items, was given, then the program explained. Students were instruced as to how to use the book and informed that it was *not* a test. They were allowed two weeks to complete the program (Chapters I and II). This was done outside of class time. Chapter I was used only as review and orientation to the method of programmed instruction, and the content was not included on the test. All students were given the post test at the end of the two week period. During this two weeks, no additional material on communicable disease technique was given in lecture, assignment or ward practice.

Objectives:

The objectives for the program were partially derived from those stated by Sender and are stated as behavioral outcomes. The first nine objectives can be evaluated by paper and pencil tests. Objective 10 can be evaluated by direct observation of the student in the patient care situation.

Communicable Disease Technique Objectives:

After completing the programmed unit on communicable disease technique, you should be able to:

1. define immunity and state the difference between active and passive immunity.
2. state the difference between medical asepsis and communicable disease technique.
3. state two things that we aim to accomplish by carrying out communicable disease technique.
4. state the portals of entry and exit of organisms that cause respiratory and intestinal infections.
5. identify procedures that can be safely carried out without an isolation gown.
7. state what parts of an isolation gown are considered clean.
8. identify safe procedures for removal and disposal of contaminated linen, dishes, and equipment, and for removing and discarding a contaminated gown.
9. state purpose and safe methods of terminal disinfection of patient's room and the equipment used in his care.
10. demonstrate correctly the following procedures when you care for children with communicable diseases:
    a. wearing, removing and disposing of isolation gown and mask.
    b. handling and disposing of linen used in the patient's room.
    c. handling dishes, toys and equipment used in the care of the patient.
    d. handling and disposing of body wastes.

Evaluation:

1. The ratio of gain to possible gain was computed as a measure of how much the student learned from the program.
2. The student's ability to apply what she has learned to the actual care of a patient can be determined by actual observation. A check list type of observation sheet was prepared for this purpose. This was not used with this group of students, however, due to lack of time.

Results:

Possible score — 27
Pre-test — Range 21 to 25 Mean 22.87
Post-test — Range 24 to 27 Mean 25.8
Crude gain (average) 2.93
Possible gain (average) 4.13
= .71 gain ratio

Since the students tested were third quarter juniors, it was anticipated that their pretest scores would be high. Both the high scores and fairly narrow range of scores indicated quite comparable previous learning. Because of the already high level of achievement on the pre-test relatively little gain could actually be accomplished. A mean gain of 2.93 was noted. An item analysis of the test showed no errors on thirteen of the twenty-seven items in either pre-test or post-test.

Students' Response to the Programmed Text:

Each student was asked to make written comments in regard to the method and content of the book. Most students were quite enthusiastic although they indicated it would have been more useful to them in Fundamentals or at the beginning of the junior year. They felt that the branching program was a good idea since it provided such comments as, "Now you're guessing." "No, no, no," or "You missed the boat on that one," when they made an incorrect response. Several students asked to keep the book after they had completed the assigned sections because they wanted to read the remainder. Some of them checked it out later to review when they were caring for children with communicable diseases.

Future Plans:

The same program and testing is being planned for the current quarter, i.e., first quarter junior students who have just completed Fundamentals and are beginning their first quarter of the Maternal-Child sequence. It is expected that their pre-test scores will be lower than those of the previous group.

AN EXPERIMENT IN TEACHING INTRODUCTION TO COUNSELING TO SENIOR STUDENTS IN PSYCHIATRIC NURSING BY THE PROGRAMMED INSTRUCTION METHOD

Senior Students in Psychiatric Nursing

University of Utah
Camillas Wood

Introduction:

The use and research of teaching programs in educational institutions is a recent development occurring during the past ten years, with more than three-fourth of all the projects being done or reported in the past three years.[1]

The field of teaching programs, although expanding rapidly, is still in it's infancy; with few programs designed especially for specialized training fields such as nursing. The lack of programs available and suitable to schools of nursing reflects only the newness of the field and the dearth of nursing instructors engaged in the writing and research of programs for nursing students. If, as Lewis[2] reports, the use of programs in the classroom frees the teacher for other work, the use of programs in schools of nursing should be a welcome aid in helping already overburdened teachers be more effective in the classroom.

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[1] Wilbur Schramm, *The Research on Programmed Instruction, An Annotated Bibliography*, (Stanford University, 1962), p. 4.

Objectives:

The experiment was designed (1) to test the effectiveness of the programmed instructional unit, *An Introduction to Counseling*[3] with Senior Student Nurses taking basic psychiatric nursing, (2) to determine if the program met some of the overall course objectives and (3) to obtain students' reactions to using a programmed instructional unit as a part of their course in psychiartic nursing.

Design:

Twenty-one senior students in Basic psychiatric nursing were given the programmed instructional unit as an out of class assignment. Pre, post, and retention tests on the program content were given. Each student answered an evaluative questionnaire on the program. Gain-ratio data was collected on both post and retention tests. The data revealed students had a mean gain-ratio of .52 indicating that the students learned from the program 52% of what they could have learned. A rank-order correlation was done on the pre and post test scores and an 0.13 correlation was obtained indicating some relationship existed between the student's rank in class obtained by scores on pre and posts tests. After a period of 4¼ weeks after the post-test and without the programs for study the students retained 94% of their knowledge.

Conclusion:

The students learned more than fifty percent more than they knew about counseling after taking this program. This learning, however, was measured on a paper and pencil test. The students indicated that even though the material was interesting and the program fun to take it was more difficult to apply the counseling concepts to the actual patient situation. Some studies should be done to determine if high scores on post-tests indicate or have some relationship to ability to put into practice counseling techniques in the actual clinical situation.

To determine if learning, as shown on paper and pencil tests, indicates ability to function in the clinical situation, a tabulation of the frequency of the students' use of the kinds of responses given preference in the program, while with patients could be done.

An anxiety scale questionnaire such as Taylor's Manifest Anxiety scale could be given with a student evaluation of the clinical experience prior to and after taking the program as an indication of the amount of anxiety reduction the program would effect in the student. The existence of many other variables such as lecture material, student-teacher conferences and increased familiarity with the clinical situation would, however, confuse the reasons and relationships of any findings on the anxiety scale.

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[2] Earl N. Lewis, *Experimentation in the Development of More Effective Methods of Teaching Foreign Languages by Making Extensive Use of Electromechanical Aids*. Baton Rouge, La.: Dept. of Foreign Languages, Louisiana State University, 1961. 19 pp.

[3] Della-Piana, Gabriel and Faye Ellison, *An Introduction to Counseling*. University of Utah, Department of Educational Psychology, Salt Lake City, Utah, 1962 (unpublished) The Program Tested.

The test and the program should be continually revised in order to prefect their teaching and evaluative effectiveness. Because of the favorable results obtained by using this program with nursing students the author suggests that other programs covering short units in psychiatric nursing be developed and evaluated for use.

ABSTACT OF PROJECT UTILIZING TELEVISION IN TEACHING

BASIC PUBLIC HEALTH VITAL STATISTICS

Public Health Nursing Senior Level Course

Ada Burt **University of Utah**
Edla Johnson

Introduction:

The Public Health Organization and Sciences Course in Public Health Nursing is a four hour credit course, taught to all students during their public ehealth nursing experience. Since 1955, the public health nursing faculty have planned jointly with the Utah State Health Department personnel and other health and welfare personnel in Salt Lake City for the content and teaching of various aspects of this course. It was thought that if other methods of teaching this course could be used, it would release people from teaching; also, the course content may be more effectively integrated into the student's field experience. The area of Vital Statistics was selected as the content was quite specific, there would be less material to be covered and it could best be covered within the budget limitations available for the project.

Objective:

To study the appropriateness of educational television in teaching the unit of Public Health Vital Statistics in the course "Public Health Organization and Sciences."

Design:

The student groups selected for participation in this project were: (1) a conventionally taught group consisting of fourteen students, six basic nursing students and eight general nursing students, and (2) an experimental group consisting of twenty students, eight basic nursing and twelve general nursing students.

Evaluation Devices:

The evaluation instrument developed for the project was a recall test consisting of fifty-four items. This test was given to the students as both a pre-test and post-test. The only difference between the two tests was the statistical data to be used in the construction of a bar graph. The same instrument was used for the conventional and experimental groups.

Conclusion:

The evidence is clear that students made significant gains from instruction through both methods. The difference between the two groups was statistically significant at the .001 level. The difference in the experimental group in the before and after measurement was greater than the difference in the conventionally taught group in the before and after measurement, and was probably not due to chance factors.

Problems Encountered:

1. The time spent in getting the necessary background information for the television script conflicted with regular teaching responsibilities and personal commitments of the faculty.

2. There were many conflicts related to scheduling when the unit was ready to be televised. It was difficult to coordinate the availability of the television studio and the availability of the faculty.

3. The television personality chosen to present the program had not been involved in the planning for the project, except as a consultant. She therefore,

didn't have the same background orientation to the subject matter as the faculty.

4. It was difficult to work out the content areas of graphic presentation in a satisfactory manner.

5. The presentation of content to assist the students to evaluate the validity of statistics was not incorporated in the unit. This was an oversight on the part of the faculty.

Possible Solution to Problems:

1. Release time for faculty to devote to such a project is essential. Clinical teaching is time consuming and faculty members have frequent interruptions during the day. Many weekends are utilized in organization activity. This kind of a project, requires creative thought which is challenging, but also time consuming. Several uninterrupted weeks per year with the availability of expert consultant help would make it possible for faculty to develop the skill to produce quality programs.

2. The television personality selected to present the unit should be involved in the actual development of the script. The narrator of this program served as a subject matter consultant. She was selected to narrate the program because of her general knowledge of the subject matter, her attractive general appearance and her good speaking ability. The presentation would have been easier and less stress producing for the narrator if she had been involved in the actual development of the script. If the educational budget would permit experimentation and allow for failure, a good television teacher could probably be located in every faculty group.

Ideas for Further Study:

1. A unit using the same test and visual materials, but using a teaching tape for the script will be developed if time and equipment is made available. The authors believe that the cost of putting the narration on tape would be negligible. An additional section will be added to assist the student to evaluate the basic ingredients of good statistical data.

2. Student enrollment is expanding rapidly and new field placement areas are being developed away from the educational center. As these areas increase it will become increasingly difficult to schedule the Public Health Vital Statistics film. If the visual materials could be put on a film strip each faculty member could have her own tape and film strip and could adapt this material to her own method of teaching.

3. The materials could be included in an outline for students pursuing independent study, and could also be made available to students for frequent reference or review.

4. An additional use for the Public Health Vital Statistics kinescope might be for orientation to the Division of Vital Statistics for new employees of the health department. The pre and post test might be used to compare the achievements of the student group with the achievement of the individual already motivated to the field of public health, such as nurses, sanitarians, doctors.

Ideas for the Future and Future Plans:

1. During 1964-1965 the conventional and experimental method will be continued in teaching the vital statistics unit so that additional data can be gathered regarding both methods of instruction.

2. During 1964-1965 plans will be formulated for the development of a film strip and teaching tape utilizing the script and visual materials, providing time and funds are available for the project.

3. The kinescope will be made available to health department personnel or other interested groups who might find it useful for orientation or inservice educational purposes.

4. Plans will be developed to share the information gained from the new teaching methods workshop with college of nursing faculty if time is made available for this purpose.

A PRELIMINARY EXPERIMENT IN THE USE OF TELEVISION IN TEACHING THE PREPARATION AND ADMINISTRATION OF PARENTERAL MEDICATIONS

Stella I. Hay **University of Washington**

Introduction:

A need exists for the development of methods of teaching Nursing Fundamentals to large classes that are more economical than present methods of instruction in terms of cost, time and facilitation of learning. Instructional television techniques may be a means to such an economy and, if so, teachers possessing ability to use the method are needed.

An experiment in the use of television in teaching the preparation and administration of parenteral medications in the Nursing Fundamentals course at the University of Washington School of Nursing spring quarter 1964 was undertaken as a pilot study.

Objectives:

The purpose of the study were to (1) determine if students taught with the technique of television learn as effectively as students taught with the conventional lecture-demonstration method, and (2) serve as a training session for the instructor in the use of instructional television techniques.

Design:

The initial study group consisted of two groups of 40 third quarter, sophomore students. The N of 40 for both experimental and control groups was chosen because of seating capacity in the classroom where television could be used. The term control is used to describe the students who were taught by the conventional methods. Each experimental subject was matched with a control subject on grade point average. Matching precision was within +.03 of a grade point for all students but the two with the highest grade point average. In this case there was a grade point average difference of .11. Due to dropouts, changes in registration and other unforseen events, data were finally analyzed on 58 students, 29 in each group.

The experimental group classes were held in a studio-classroom. It was equipped with a mobile Dage 20 television camera with viewfinder and EIA synchronization; four monitors (Conrac) 21 inch size, on floor stands, for student viewing; one 17 inch monitor for the instructor. The lights were suspended from the ceiling. The television camera was operated by an experienced person, the director of Health Sciences Television and Dental Photography.

The students in the experimental group met together in the two hour class each week throughout the quarter. The two classes in the experiment were the fourth and fifth classes of the course. The television was used for enlargement purposes and primarily during demonstrations. The students in the experimental group were informed that they were participating in an experiment, but the students in the control group were not, nor were the other three Nursing Fundamentals instructors informed as to which sections were in the control group.

The objectives of the preparation and administration of parenteral medications classes were as follows; the sophomore students would be able to:

1. State the microbiological, chemical, physical and psychological principles involved in the preparation and administration of drugs by the subcutaneous and intramuscular injection routes
2. Describe the actions of the nurse in preparing and administering drugs by subcutaneous and intramuscular injection which are applications of the microbiological, chemical, physical and psychological principles.
3. Properly handle equipment used in the preparation of drugs for parenteral administration.
4. Fill syringe with correct dosage of medicine when the drug is in tablet form, an ampoule, a single dose vial, and a multidose vial.
5. Correctly follow the procedure for preparing drugs and administering subsutaneous and intramuscular injection.

The learning experiences involving the use of television included demonstrations on 1) preparing drugs for parenteral administration, and 2) administration of a subcutaneous injection and an intramuscular injection. After the demonstrations, each student administered a subcutaneous injection to a fellow classmate, and later in the laboratory administered an intramuscular injection. Subsequent to this each student administered at least one intramuscular injection to a patient.

Evaluation:

A pre-test, post-test and final test were administered to all students in all sections in the course. All sections used the check list developed by Hoffman[1] in the clinical laboratory for performance evaluation of the preparation and administration of parenteral medications. A questionnaire which sought the opinions of the students relative to the use of television in classroom instruction and an evaluation of its use in the teaching of the administration of medicine was completed by the students in the experimental group. Student's T was used to determine the statistical significance of differences on the pre- and post-test data only.

The findings of the study were that 1) there was no statistically significant difference in the learning of the two groups (on the post-test, however, the experimental group mean was 62.7 (Sd=3.07) and the control group mean was 60.9 (Sd=309), T=1.91, p .10 .05; on the performance check list, the students in the experimental and control groups made about the same proportion of crucial errors were 3.4% for both groups and administration errors were 8.4% for the experimental group and 13.3% for the control group)); 3) the majority of the students (93%) found the television to be helpful especially for demonstrations and the presentation of visual materials; and 4) the class preparation time using television was much greater than that required without television.

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[1] Hoffman, Katherine Janet. "A Suggested Method for the Development of a Tool to Aid in the Evaluation of Performance in Nursing," (Unpublished Doctoral Dissertation, The University of Washington, Seattle, 1956) pp. 166-167.

Conclusion:

1. Nursing fundamentals classes which involve considerable technique demonstration may be taught more economically using television since one instructor could teach a large number of students at one time.
2. Although the experiment showed no statistically significant differences in learning of the two groups, the findings may have been quite different had the instructor been skilled and experienced in the use of instructional television.

Problems:

Problems encountered included 1) finding time to prepare visual materials, to prepare for the class and rehearse sufficiently before each class while carrying the regular teaching assignment; 2) being unable to obtain several reliable measures of performance of the students in the clinical setting since it was considered impractical and too time consuming to do more than one evaluation; 3) the difficulty in having the pre-tests administered to all students and having them returned to the instructor doing the study. The pretests of two students in two sections which were not in the study unfortunately were not turned in to the instructors of those sections on the day of the test. Since these two tests were "at large" for a period of time it is not known if and to what extent contamination of the post-test occurred in either or both of the experimental and control groups. Both students expressed surprise that they still had the tests in their possession, and hopefully these students did not share the tests with others.

Since this was a pilot study, replication is suggested using better controls and larger samples. A study to determine how television can best be used in combination with other learning experiences to make the learning of Nursing Fundamentals most efficient is suggested.

A COMPARISON OF TELEVISION AND CLASSROOM INSTRUCTION IN TEACHING THE ADMINISTRATION OF DRUGS

Sophomore Students Baccalaureate Degree Program

Rizpah Lindstrom **San Jose State College**

Introduction:

It was the concensus of the teachers involved in teaching the class on drug administration that any rationale for the use of television for teaching a relatively small group of students could only be based upon improvement of the quality of teaching and learning by the teachers and students. Therefore this study was undertaken to evaluate the effectiveness of the use of television in the teaching of a class on the administration of drugs, a part of a unit in the sophomore nursing course, Introduction to Nursing.

Objective:

To determine under which of two classroom learning situations the student will be more skillful in her motor performance in the preparation and administration of oral, subcutaneous and intramuscular medications when tested in the clinical laboratory following the classroom instruction.

Design:

The two classroom situations only differ in that one employs use of television rather than the use of the conventional classroom lecture-demonstration. Better learning is projected because it is thought that television medium will enable all students to see better the demonstrations of the instructor. Both groups of students will be full-time sophomore students. All students in each group will be enrolled in the course, Introduction to Nursing. Both groups will be compared as to 1) entrance examination scores (AECT), and 2) grade point averages determined upon completion of the freshman year. The number to be tested in the study will be approximately fifty students—twenty-five in each group.

Both groups will be taught by the same teacher. Exactly the same content will be presented to both groups. The TV group will receive instruction by closed circuit television in their classroom. The lecture-demonstration group will receive instruction by the conventional classroom lecture-demonstaration method.

Evaluation:

Data will be collected by three different teachers in three different clinical situations. Each student will be checked on her motor performance during her first experience in the clinical situation by preparing and administering an oral, subcutaneous and intramuscular medication to a patient. The three teachers involved in the evaluation of the student's performance have agreed upon the criteria to be used in the individual performance tests.

The test scores will be analyzed by appropriate statistical procedures by the San Jose State testing office.

Conclusion:

Conclusions of this study cannot be made at this time, as the study is still in progress. The study will be completed during the Fall Semester, 1964. The lecture-demonstration class has been taught and twenty-five students were checked on the Individual Observation Sheets. The video-tape on drug administration has been made. The TV group will be taught with the use of the tape in Fall, 1964.

LEADERSHIP DEVELOPMENT

Senior Nursing Students

Dorothy Tollefson **Pacific Lutheran University**

Introduction:

A. Problem: Does educational television provide a learning experience of sufficient value to warrant its use throughout the curriculum?

B. Pacific Lutheran University has a closed circuit television system which is available to the School of Nursing. The senior nursing students were used in this pilot study since they were readily available during the school year.

Objectives:

To study the value of a televised teaching tool combining lecture and demonstration.

Design:

The senior class was equally divided each semester providing one control group and one test group. During the fall semester the usual lecture-discussion-role play method of teaching was used. The test group in the spring semester received the televised learning experience. No effort was made to match the two groups.

Objectives of Advanced Nursing were that the senior nursing student:

1. Explains a minimum of five purposes for the nursing team conference.
2. Explains four reasons for pre-planning for the nursing team conference.
3. Lists the principle subjects appropriate for discussion in a nursing team conference.
4. Lists and describes the essential components of the written plan of care formulated during the nursing team conference.

Evaluation Devices:

The control group and the test group were given identical tests within a week following the class to aid in determining the effectiveness of this teaching technique.

Conclusion:

The group used for this study was too small to give a valid evaluation of the effectiveness of a televised learning experience. The numerous problems encountered have made it necessary to continue the study over a longer period of time. At this point the greatest learning has been on the part of the instructor rather than the students.

Problems Encountered:

A. The total enrollment in the senior class was only sixteen which provided eight for each group. The number of students was too small to provide a valid evaluation.

B. The television department did not have a video camera which necessitated the use of commercial television facilities.

C. The videotape recording was shown on an open circuit at a time when full control of the test group was not possible.

Possible Solutions to Problems:

A. This teaching technique will be used again during the next school year on a somewhat larger group of students.

B. The television department should have a video camera by the early part of next year. Should this not materialize, live television may be used.

C. Firm control of the test group will be ascertained well before the learning experience is scheduled.

Ideas for Further Studies:

A. A continuing study of the effectiveness of educational television will be undertaken during the school year of 1964-1965.

B. Studies of the attitudes of students and faculty toward educational television would be both valuable and challenging.

C. Additional studies of the use of television in nursing education should be undertaken.

ABSTRACTS OF PROJECTS UTILIZING INDEPENDENT STUDY

8

TEACHING OF NURSING IN THE SCHOOL HEALTH PROGRAM THROUGH INDEPENDENT STUDY AND A DIRECTED PRACTICUM

Senior Nursing Students
Nursing Care of Adults and Children; Clinical Laboratory Portion on School Nursing

Kathryn L. Argabrite **University of California at Los Angeles**

Introduction:

Statement of the Problem: Curriculum change in the undergraduate nursing education program has produced the problem of providing learning experience in school nursing for a large number of (42) senior nursing students. This must be done without student-faculty contact for lecture-discussion purposes and within a time limit of 16 laboratory hours. In order to most effectively achieve the objectives, it was decided to use the experimental approach of a new teaching technique—self-study and a Directed Practicum.

Objectives:

The following objectives were considered a basic part of the undergraduate nursing education program:

1. The student explains and describes with one or more anecdotal examples from her school nursing experiencess, each of the five major functions of a nurse in a school situation.
   The Nurse in the School Health Program.
   a. Utilizes concepts of human growth, development and behavior in the milieu of the school health program.
   b. Recognizes and deals with developmental and health needs of students especially in those areas of prevention, detective, and treatment which necessarily influence educational programming.
   c. Utilizes existing community services for children and youth and spearheads the development of additional services when indicated by the needs of the school health program.
   d. Comprehends the nature of the educational setting in which the schoolnurse works.
   e. Selects and uses processes appropriate to the roles asumed by the school nurse.[1]
2. The student applies and gives a verbal explanation of her application of previously acquired knowledge and skill to the function of nurses in school situations.

Design:

Description of the new teaching technique. A faculty representative preplanned the student learning experiences by use of written communication and by individual and small group meetings with public school personnel for the purpose of orientation to the basic nursing program, interpretation of the objectives and learning experiences and assignment of students to individual school nurses; she made the student assignments and introduced the program to the students; she prepared and distributed to each student and participating school nurse the following materials:

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[1] Florentine, H. G.: "The Preparation and the Role of Nurses in School Health Programs." Guidelines for the Use of Administrators, Educators, and Students. National League for Nursing. 1962.

1. An annoted bibliography.
2. A stenciled copy of the guidelines and objectives. The guidelines were prepared with one guideline on each page. In double column under each guideline were several suggested student centered supporting behavioral objectives and illustrative learning experiences potentially available in the school situation. These were developed by the investigator for the purposes of this project.

Each student was expected to complete a minimum of one experience under each guideline, keep a record of the experiences she completed, and complete a written examination basd upon the objectives.

Evaluation Devices Used:

Upon completion of the directed practicum, each student completed a written examination in which she was to explain each guideline with an illustratiye anecdote from her school experience and identify the knowledge and skills she used to carry out the experience.

Conclusion:

The pattern of self-study and directed practicum represented one new teaching technique in which a single faculty member may provide a wide range of learning experiences in school nursing in as many situations and for as many students as were in need of the experiences. It provided for uniformity, diversity and flexibility of learning experiences, thus maximizing the learning potential of the student by meeting individual students' needs and abilities. It required a great deal of time on the part of one faculty member in the planning and evaluating processes but made optimum use of student learning time. For the most part it was believed to be an effective approach to meeting the objectives with an acceptable degree of understanding.

Problems, Solutions, Future Studies:

Most of the problems encountered resulted from communication difficulties related to the limitation of contact with other faculty and students. It is expected that discussions held with relevant faculty and a few suggested alterations in implementation will remedy these problems when using this approach to student learning during the next academic year. It will be interesting to continue the evaluation with the next group of students comparing their performance with the one report here.

SELF-DIRECTED STUDY AS A METHOD OF TEACHING THE PROCESS OF LESSON PLANNING

Graduate Level Students in Mediral-Surgical Nursing Master's Degree Program

Virginia J. Carozza **University of Colorado**

Introduction:

The problem of this project was to develop a plan to provide experience in the process of lesson planning, prior to the medical surgical teaching or the supervision practicum, for students in the medical surgical graduate program in nursing.

All students in the medical-surgical graduate program must complete their course of study in one year. Because of the limited time involved, the students have little control in the choice of courses or opportunity to do independent intellectual work. Since the program at this time could not be changed, would not a different teaching technique, such as self-directed study within the existing course of this structured program widen the students' range of educational experience and promote a more accepting attitude toward independent intellectual work?

Objectives:

The purpose of this project were: (1) to implement a technique of teaching in which students were given greater than usual responsibility for their own learning, and (2) to determine the attitudes of the students toward self-directed study technique.

Design:

The population consisted of eighteen graduate students in nursing registered, during the Spring Semester, 1964; fifteen students in the medical-surgical teaching practicum and three in the supervision practicum. The teaching practicum was designed for those students whose primary interest was nursing education and teaching nursing service personnel. Since teaching was a function of both groups, the graduate students in both practicums were included in this project.

The availability of two instructors for conference time was posted each week, and the students could make appointments for conferences as they desired.

The self-directed project involved having the students select, prior to the teaching practicum or supervision practicum, an area of interest within medical-surgical content. It was the students' responsibility to acquire the theoretical knowledge of the area of interest. The students also choose from this area of interest a topic of medical-surgical nursing which they were to develop into a lesson plan for basic nursing students if they were in the teaching practicum. For those in the supervision practicum, their topic was to be developed into a lesson plan for in-service classes for nursing service personnel.

At the beginning of the Spring Semester, an unstructured practicum of five weeks was designed so that the students might study the clinical aspects of their areas of interest. The students were assigned among three hospitals, where the kinds of nursing problem they were studying might be found. Each student made her own time schedule, selected the patients for study, and determined the method of studying the clinical aspects.

Evaluation:

The evaluation devices used were: (1) Each student submitted a written lesson plan. (2) A peer teaching experience was set up so that each student could present her class to her peers before teaching basic students or nursing service personel. The peer group offered constructive criticism at the end of each class, and the practice teacher could either revise the lesson plan or not, depending upon suggestions offered by the group. (3) The plan was later taught by the practice teacher to the group for which it had been planned. On a form previously devised, the presentation was evaluated by the instructor of the graduate students; for the presentation to basic students, their instructor also evaluated it. (4) An opinionnaire using a Likert type scale for rating was developed to determine the attitudes of the students concerning their experiences.

Conclusion:

Still in the process of evaluating data.

Problems:

The students were asked in the Fall Semester to select an area of interest in medical-surgical nursing and to study this area during the last eight weeks of this semester. The timing of this assignment was poor. Students were too concerned about term papers, examinations and studying for the semester, that they couldn't find time to prepare themselves for the Spring Semester. At the time this assignment was made, a false assumption was made, namely, that since the graduate students had had medical-surgical nursing in their basic programs, studying one area of medical-surgical nursing would not be too time consuming. However, most of the graduate students' theoretical knowledge of medical-nursing was limited and superficial, and, therefore, they required more time to study.

Some students, being used to having educational experiences which were highly teacher directed activities, had problems indentifying their educational goals and, therefore, did not know what to do with the time spent in the clinical area and were slow in starting.

Inadequate classroom facilities and credit hours, class scheduling and other classes which conflicted with availability of the student to pursue her study were just a few of the problems which could not be controlled by the instructor.

Having a full teaching schedule made it difficult to find time to plan, execute, and evaluate this program.

Possible Solutions to Problems:

Have several ideas about possible solutions, but at this time have not clearly defined a course of action.

Ideas for Further Studies:

I plan to continue this project next year, refine evaluation tools and work out the problems encountered.

TWO METHODS OF TEACHING THE HISTORY OF NURSING

Freshman Course – Nursing 321FG
Fundamentals of Nursing Unit II
Heritage of Nursing

Charlotte R. Coe **University of Wyoming**

Introduction:

The problem was to study the use of two methods of teaching the Heritage of Nursing (History of Nursing) to matched pairs of Freshman students in nursing.

The reason for the selection of this problem was to determine if better use could be made of the students' time by using independent study (self-directed study) in the teaching of the Heritage of Nursing.

From the class of thirty-eight Freshmen, twenty-eight were selected to participate. The twenty-eight were matched pairs on the basis of predicted grade point averages, age and home address. Group L attended lectures and Group S did independent study.

Objectives:

The objectives of the study were to answer the following questions:

a. Is there any difference in the ability of the matched pairs of students to answer questions correctly concerning the Heritage of Nursing when one group studies independently and the other group attends lectures.

b. Is there any difference in the ability of the two groups to write a paper which meets certain specific criteria for presentation of content and evaluation of the paper?

c. Do the opinions of the two groups reveal any dicerences their attitudes toward history of nursing, their use of references and their evaluation of participating in the study?

Design:

Each group had one and one-half hours of class to orient them to the project and to the plans and requirements for the course. All received the same printed information. Group S did not meet again during the Fall Semester. They met for one class period in March to discuss the course and their progress to date. Group L had four 50-minute class periods during the Fall Semester.

One teacher was responsible for the entire unit of instruction.

Evaluation Devices:

Tests. All students were given the same test on the Heritage of Nursing as part of the final examination for the course, 321F, in January and 321G in May.

Paper. All students were given written instructions and a verbal explanation of the requirements for the paper. All students were invited to consult with the teacher (the investigator) concerning any aspect of writing the paper. (Six of the twenty-eight students participating in the study did so.)

Student Opinion. Information was collected from the evaluations requested of students at the end of Nursing 321FG, Foundations of Nursing.

Conclusions:

1. There was almost no difference in the ability of the two groups, as they were matched on the basis of predicted grade point averages.
2. There was no statistically significant difference between the performance of Group S as compared to Group L.
3. This study should be repeated with a larger group of students. Sophomore or Junior students should be used in order to avoid the problems encountered with the class of Freshman.

Problems:

a. The teacher (the investigator) of the content had not taught this subject before; therefore, her insecurity and relative unfamiliarity with the subject may have adversely affected her effectiveness as a teacher.

b. Information concerning the predicted grade point averages was not available for all students until the end of the Fall semester so that selection of Group S and Group L had to be done without including all the students at the beginning.

c. The class of students had been described as "different" by other teachers (one with more than ten years of teaching Freshmen in this program). The class was characterized as being extremely indifferent, disinterested and bored. There were several extraordinary discipline problems during the Fall semester.

d. Twenty students dropped the course during the year.

e. Another research project using a card sort was not especially pleasing to the students and may have affected opinions of this research.

Possible Solutions:

A teacher who is willing to carry on this kind of research and who has taught the subject before would be more effective as the teacher.

A solution for problem b. seems to lie in the selection of the class for this type of study. Sophomore or Junior students on whom the information is available would be advisable.

A solution for problem d. is tied in with the soultion for problem b. Using Sophomore or Junior students would eliminate the problem of dropouts.

Ideas for Further Study:

This research design should be used to gather more data.

This design should be used in other nursing courses in which the student can get information from books and the experience, knowledge and judgment of the teacher cannot or does not greatly enhance the subject matter.

Research could provide some information on when is the optimum time for teaching of history of nursing.

A follow-up study is planned for the Fall, 1964. A multiple-choice and essay test will be given to both groups to determine if there is any difference in the amount of recall between the two groups.

A COMPARISON OF STRUCTURED AND SEMI-STRUCTURED METHODS OF TEACHING, WITH EMPHASIS ON SELF-DIRECTED ACTIVITY

Senior Level Students in Advanced Nursing Course

Laura Mae Douglass **San Jose State College**

Introduction:

From a review of the literature, it was determined that the educator must believe in the worth of independent or self-directed study of it to be effective. The teacher must hold the philosophy that students have a right to exercise independence and self-direction and must be free to make judgments. The instructor's main function is to provide circumstances which would produce an environment where the student is free to learn as an individual, to question, to look for implications and applications and to integrate previously acquired knowledge with concepts or principles.

Self-directed study can be implemented in any setting, for all students gain from the experience, even though some students require more guidance from the instructor than others. The self-directed student was found to be more controlled and better organized than his peers and was apt to be interdependent, venturesome, resourceful, persistent, reflective and creative. Studies indicated that while tere was a small difference in favor of self-directed groups in the mastery of course material, greater use of resource materials was evident, and there was growth in ability to think critically and to define and solve problems.

Objectives:

It was the purpose of this project to compare the results of traditional, or structured, method of teaching with that of a semi-structured method, which included self-directed activity. The experiment was conducted with a group of eight senior nurses enrolled in an eight week course called "Advanced Nursing."

Design:

Both the control and experimental groups were given a written pre-test, which consisted of a controlled nursing situation, prepared by a sub-committee of the California League for Nursing, to study basic competencies expected of graduates from a baccalaureate program of nursing. The students were asked to study the situation; then to (1) identify problems; (2) state principles related to the problems; and (3) plan an appropriate course of action. The control group had traditional, or structured method of teaching, while the experimental group was exposed to the trial method of teaching. After a four week experience, all students were assigned to a one day patient care experience in which the nursing situation was unknown to the student. The patients in the nursing situations paralled the nursing situation used in the pre-test in respect to number and variety of problems. Following care given to the assigned patients, the control group was not given time off from the clinical laboratory for independent study, while the experimental group was given the next day off. An effort was made to give the free day at a time when the student would not be burdened with other responsibilities of the course, that is, team leading, preparation for nursing care presentation, or conducing a seminar. No instructions were given concerning the use of the allotted free time. All students were then given a post-test involving an actual nursing situation. The measurement technique was the same for the pre and post tests. All of the responses were classified into five categories: (1) physical, (2) emotional, (3) patient education, (4) self, (involving student's perception, attitudes, awareness, etc.) and (5) other, (recognition and use of community resources, maintenance of harmonious relationships with personnel in all departments, etc.) The number of responses was categorized and tabulated for each of the participants in the control and experimental groups for both the pre and post tests.

Controlled variables included (1) experience in the same 365 bed, local, voluntary hospital, (2) comparable educational attainment, (3) like collegiate educational background, (4) all enrolled in the same course and (5) all received the same general orientation to the course.

Uncontrolled variables included (1) one group having experience with medical patients and one with surgical, (2) one male student, (3) hospital connected past work experience ranging from none to full time employment, (4) three students employed part time while enrolled in the course, (5) one married student with no children, and (6) two instructors, one with the control group, and one with the experimental group.

The manipulative variable consisted of different teaching methods and management of class time and activities. The similarities and differences in th plan of students enrolled in the course included:

	Control	Experimental
Formal Class Hours	33	26
Examination	7	8
Required Reading Assignments	9	8
Req. Bib. Cards	9	0
Nursing Care Presentaions	1	1
Seminars Led by the Student	1	1
Six hr. Days of Clinical Practice	22	22
Counseling with Instructor (Scheduled)	½ hr.	none

The major hypotheses contended that the opportunity for initial self-directed self selected learning experience would motivate the students to seek a higher level of knowledge and understanding. It was thought that students in nursing would be attuned to both covert and overt patient needs in a nursing situation and the student would be better able to perceive relationships between recognized needs, related principles and relate courses of action.

Findings:

The results of this investigation supported the contention that students in the study would be able to perceive nursing problems, identify principles relating to those problems, and would be able to plan appropriate courses of action. However, when identifying problems and stating principles, the students limited their responses to the areas of "Physical" and "Emotional", giving only limited attention to "Patient Education", "Self" and "Other". On the other hand, when planning courses of action, all students seemed more attuned to the five major areas.

The experimental study did not support the contention that, after an experience with self-directed activity, the better than average student would be able to identify a proportionately larger number of patient problems in a given nursing situation, than would an average student.

Some difference was noted in the above average students in the experimental group, after the opportunity was given to study independently, in their ability to state principles. This supported the hypotheses that the better than average student would be able to plan proportionately more corresponding principles relative to identified problems, than wiuld the average student.

It was hypothesized further, that the average student might plan courses of action not based on recognized problems or related principles. This statement proved to be true, not only with the average student, but with all participants in the study, for no marked difference in the groups was noted. All students responded to some degree in all of the categories, which indicated an awareness of need in all areas, but proved, in this case, that verbalization of the need and corresponding principles did not always precede the action.

Ideas for Further Studies:

Consonant with a review of the literature and the results of this study, certain implications can be drawn and recommendations for further study proposed. The null hypotheses may be attributable to several factors such as attitudinal set of students, too many requirements of the current course, poorly timed free time, very small sampling, which greatly magnified the chance factor, and the possibility that students transmitted information from one group to another. Future studies of this kind with a larger sampling should be carried out with a number of classes to determine the validity and reliability of the proposed teaching method. Retention studies would be of definite value as well as the exploration of thought patterns. Instructors should carefully examine the philosopy, objectives, purposes, content and teaching methods of the program and in their courses to decide whether they represent the kind of thinking student they want to produce. The faculty might give particular attention to the threads of learning which have been integrated into the nursing program and evaluate the effectiveness of this method of teaching.

INDEPENDENT STUDY IN NURSING OF CHILDREN

Junior Level Students in Nursing of Children

Constance Drumheller **Loretto Heights College**

Introduction:

This project involved the use of independent study as a method of teaching Nursing of Children so that each student could progress at her own pace and utilize her own resources in learning. The problem was to determine if, and to what extent, independent study in Nursing of Children could be employed as a technique of teaching.

Nursing of Children is a five semester hour course placed in the Junior year. Seventeen students were in the group involved in this project.

Objectives:

The student-focused objectives which guided this project were:

- Development of a more positive attitude toward study
- Improved utilization of the instructor
- Greater depth in study
- Persistence of self-direction in other courses
- Greater self-direction in learning content material
- Knowledge of content at least as good as that of the previous group who took the course

Design:

For this project class hours were reduced from 48 to 16. No modifications were made in laboratory hours or laboratory practice. At the initial meeting at the beginning of the semester, the following items were given to the students: a list of content to be covered with detailed directions as to the conduct of the course, method of grading and terminal behaviors expected of the student; list of the topics for the 16 class hours, and a reading list containing selected references. The topics covered in class were those relating to concepts, current problems and other areas of content less accessible to the student (and which required clarification by the instructor). The students were advised that the instructor would be available at all times for individual or group assistance.

Evaluation:

Evaluation of this project was based on the objectives. Devices used were: midsemester and final examinations (same tests as given to previous group — for purpose of comparing scores); NLN Achievement Test in Nursing of Children (with comparison of scores of previous group); student evaluation of changes in study and attitudes toward study; student evaluation of independent study as a method of teaching the course; and instructor's evaluation of students' grasp of content based on application in laboratory, performance in conferences and direct questioning of the student.

Conclusion:

1. There was no apparent change in attitudes toward study but students did report an increase in depth and scope of study.
2. Students at the junior level are not ready for independent study as carried out in this project for these reasons:
   a. need of student for greater direction and contact with teacher in the classroom
   b. the nature of course content and laboratory practice make independent study difficult
3. Some form of independent study *could* be used in this course.

Problems:

Problems encountered in this method of teaching arose from the students' uncertainty as to the adequacy of their study. Less than half the group asked for individual assistance from the instructor but all expressed concern, at one time or another, about learning in the absence of the usual lecture and lecture-discussion periods. There was some dissension among the students as to the need for group help and not until mid-semester were they able to agree to asking for a two hour session with the teacher.

Possible Solutions:

Any future use of independent study by this teacher should provide for increased student-teacher contact in the classroom and should be evaluated with better and more refined devices than used for this project.

A COMPARISON OF TWO GROUPS OF NURSING STUDENTS IN SELF DIRECTED STUDY AND TRADITIONAL STUDY

Baccalaureate Degree Program
Senior Nursing Students in Public Health Nursing

Gertrude Hess **University of California**

Introduction:

Teaching techniques in nursing education at the University of California School of Nursing, San Francisco, utilizing independent study and measuring its effect on students, have been done informally. Individual instructors have guided students in independent study and a course giving credit for such study is offered.

The present study was designed to determine whether a group of students exposed to independent study would differ in the mastery of course material from a group exposed to a traditional study.

Despite the fact that students have been accustomed to structured learning experiences during the greater part of the five year nursing program, it was reasoned that independent study in the semester of graduation would not limit the students' learning; instead it might help stimulate them in obtaining mastery of course content.

The student population consisted of twelve students enrolled in community health nursing. They were paired according to high and low grade point averages; six students were placed in the traditional and six in the experimental, independent program.

Objectives:

The objective of the study was to determine whether differences existed in the two groups of students in the mastery of course content of community health nursing.

Design:

The twelve students were assigned to the three instructors; each had four students consisting of two matched pairs of experimental-control students. All instructors had additional students who were completing community health nursing requirements and who already were registered nurses.[1] Two public health agencies were used and in one of the agencies two centers served as student placement centers. Discussions and confrences including instructors, students and agency personnel were employed to gain consent and cooperation for the project.

At the beginning of the semester the students received a detailed course outline listing objectives, learning experiences, expected behaviors and course requirements.

The control group was taught by the traditional lecture, seminar and laboratory method — three hours of lectures, including a weekly seminar, and a minimum of sixteen hours of laboratory experience. The experimental group had no lectures, no planned seminars and a minimum of sixteen hours of laboratory weekly; they also had the freedom to explore and obtain consultation from instructor and agency personnel.

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[1] Total class enrollment 44, including 12 study students. Number of instructors six, three had study students.

Evaluation:

All students were required to take a midterm and a final examination and the NLN Public Health Nursing Achievement Test. Scores for the latter will be available later and will be incorporated.

Conclusion:

The midterm scores showed a small but insignificant difference in favor of the experimental group in the mastery of course material. In the scores of the final examination as compared to the midterm there was little difference between experimental and control students' performance, except for one student. In this instance the experimental student exhibited superior performance on the midterm. However, she encountered intra-personal difficulties which may or may not be the cause of markedly inferior performance on her finals.

The technique employed in the experiment of placing major responsibility on the student for selecting his own learning experiences open interesting possibilities for developing attitudes toward learning, for providing the student with an incentive toward continued growth and for innovations in nursing education.

Problems:

Problems encountered in doing the study resulted in part from curriculum changes in the School of Nursing. The present project was planned as a pilot study and a broader research project concerned with self directed study, including the senior class of 1964/65 and covering all but one content area of the senior year, was projected. Preparation for this study was in full swing, but had to be postponed.

Ideas for Further Study:

It is hoped that in the future self directed study techniques can be tested, not only for mastery of content but also for problem solving abilities, curiosity —seeking information in own and related fields and for leadership potential. It is also hoped that it will be possible to test whether there is a defference in the student-to-R.N. transition between students from the independent, self directed study and those from traditional study.

COMMUNITY RESOURCES—CONTENT FOR THE STUDENT IN PUBLIC HEALTH NURSING

Senior Level Students in Public Health Nursing

Helen M. Huebert **University of Wyoming**

Introduction:

One tenet of the pre-service baccalaureate nursing education is the belief that the professional nurse must be self-directive in the application of her nursing knowledge and skills to the practical situation. This self-direction is necessary for the nurse if she is to provide comprehensive and appropriate nursing care to patients and families.

The application of theory as it relates to community resources, facilities and services and the practical use of these agencies by students during their public health nursing experiences requires considerable self-direction on the part of the students. Traditional teaching methods require a considerable amount of direction by the teacher and are not, in themselves, conducive to the development of self-direction on the part of the student.

The problem was to select a teaching technique which would allow the senior student enrolled in a course in public health nursing the opportunity to study the content related to community resources in a way most meaningful to the student and which would require the student to seek this information in such a way as to be able to synthesize and use the knowledge gained in a more appropriate way.

The use of the independent study technique for a portion of theory about comunity resources, facilities and services could challenge the senior student of nursing to achieve a higher level of understanding, and thereby utilization, about the cooperation of all community agencies within the field of the public's health. Independent study could also be used to assist the student in recognizing her responsibility for her own learning.

Description of the student group. The student group consisted of two sections of senior students of nursing. Both sections of students served as the experimental group. One section of eleven students was enrolled in the course in public health nursing (8 semester hours of credit) throughout the Fall semester, 1963. The second section of eight students was enrolled in the same course throughout the Spring semester, 1964. The majority of students also was enrolled in three non-nursing courses. The students' total credit load varied from 14 to 17 semester hours of credit.

Objectives:

The student objectives for the independent study project were:

1. Compare health problems within a family or community to state, national and international health problems.
2. Clarify the relation between persisten and emerging health problems, and the services available or needed to meet these problems.
3. Evaluate and make a judgment about the community resource, facility or service to be used in the solution of health problems within a family.
4. Utilize apropriate written communication skills in the presentation of facts basic to an understanding of health needs and problems, and the resources, services and/or facilities available for the solution of these problems.

Design:

A portion of one unit and another complete unit of study in the course in public health nursing were chosen for the purpose of the independent study. This course content included official agency programs and services as well as other community resources concerned with health. Community responsibility concering health matters also was included.

Seminars were held twice weekly for the purpose of discussing community health problems and official and voluntary agencies concerned with the public's health, welfare and education. After the series of seminars, formal classes were discontinued for a period of six weeks. One optional class hour a week could be used by the students for discussion with the teacher about community health problems and services. Arrangements also were made for students to have individual conferences, again on an optional basis for the purpose of discussing the scope of the paper which was to be written, clarification of the objectives of the independent study and the general format of the required paper. The paper was due two weeks prior to the close of the respective semester.

Evaluation:

Evaluation devices consisted of: (1) a written examination administered two days after the end of the released class time; (2) the content of the written paper in relation to the established objectives; (3) a subjective evaluation of the student's contact and use of other community agencies. Each student was asked to prepare a written evaluation of the independent study and requested to indicate whether or not she considered it a meaningful learning experience.

Conclusion:

It was not possible to do a comparative study using evaluations done on previous students because of the dissimilarity of examinations, term papers and study projects. A majority of students, on self-evaluation, concluded that the independent study experience had been profitable to them, that it was a painful but useful way to learn content and self-directive habits, and the students suggested continuance of this type of study.

Problems:

Students in both sections complained about the lack of teacher direction as it pertained to specific instructions for study and the writing of the study paper. Students used the released class time for activities other than studying. Several students expressed resentment that they had been allowed to use the released class time in an unwise manner.

All of the students had had experience in other courses in writing term papers, However, some of the students believed that they were being required to do graduate level study in the preparation of the paper. The students appeared to view the study paper as the only purpose of independent study. Neither section took advantage of the hour set aside each week for general class discussion until one week before the study paper was due. The mere use of the words "independent study" seemed to threaten the students into varying lengths of inactivity.

Possible Solutions:

Emphasis on the uniqueness of independent study and the opportunity for growth on the part of both student and teacher might prove less threatening. The utilization of a term other than "independent study" might prove to be less threatening to students. but "self-directed study" has the same threat and implication.

Ideas for Further Study:

Independent study presents many avenues for further study by nursing educators. Variations in the type and dept of content as well as variations in the amount of released class time are appropriate for futher study.

Ideas for Future and Further Plans:

The independent study, modified to some extent, will be used during the 1964-65 academic year for senior students in public health nursing. A new set of objectives which are less global in nature will be used. The seminars will closely approximate a slightly decreased released class time.

INDEPENDENT STUDY AS A METHOD OF TEACHING

Junior Level Students in Nursing of Adults and Children

Colette Kerlin
University of California at Los Angeles

Introduction:

The project was developed to determine if independent study as a method of teaching would stimulate students to learn and to find a challenge and fun in learning. Independent study was defined as; Free choice by students of methods of meeting stated objectives of the course. The descriptive method was used.

Objective:

To provide students free choice of how they were to meet and demonstrate meeting the course objectives and to evaluate the outcome of such free choice.

Design:

The course objectives and specific expected behaviors were distributed at the start of the semester. The students were free to attend or not attend the lecture hours. They were required to turn in a plan of action each week for the coming week which stated their goals regarding the area of knowledge they planned to concentrate on and the resources they planned to use. The purpose of this was to facilitate the mechanical arrangements that needed to be made on the hospital wards and to serve as a data gathering device. The students were assigned on a maternity ward and were required to spend the first three weeks there to become oriented to the faculty and to the resources of the ward. They were free to utilize other resource areas and did select a variety of these. A nursing problem investigation paper was required and was to include a statement of the problem, a survey of literature and a formulation of a hypothesis, The students had a scheduled, two hour, unstructured seminar each week in order to share ideas, problems and to give each other moral support. Office time was arranged so students could come to the instructors when they felt a need to do so. Students in the project were not required to take tests given the rest of the class except for the final examination. The final examination was used only to see how the project students ranked in the distribution of scores of the total class; it was not used for purposes of grading the project students.

Evaluation:

The evaluation tools were the papers and projects of the students. These and the investigator's observations were evaluated subjectively.

Most students choose to be tested orally. Broad spectrum, open ended questions were developed in relation to the course objectives. Two instructors were present at the testing situation for validity of evaluation of performance. They recorded and coded the answers in terms of spontaneous free flow responses; with probing and the facts supplied by the instructor. The probes were generally standarized. The criteria then used for grading included the grasp and understanding of knowledge shown by the student in the testing situation with consideration given for the use of material in the laboratory setting. Consistency and depth of investigation in one subject area and the problem investigation paper were considered as balancing factors with the examination.

Findings:

At the end of the semester the students instigated a spontaneous group effortdirected toward compiling and synthesizing the knowledge from the systems of behavior being studied into a developmental sequence approach. This was compiled into a reference paper by the group.

Students spent an average of ten hours a week on the wards in comparison to the usual twelve hours. They averaged eight weeks of the fifteen weeks on the maternity ward. In their learning plans the students always had a stated purpose for the selection of the ward areas chosen. The problem investigation papers showed creativity in the selection of problem areas to study.

The students expressed that the oral testing situation was a valuable learning experience. They demonstrated a fairly good grasp of the knowledge area on which they had chosen to be tested. The students fell into the normal curve of the distribution of scores of the total class when taking thefinal examination.

Students unanimously stated that they would choose to have another semester of independent study. They accepted the challenge, were happy, and seemed to gain maturity with responsibility and self discipline.

Problems:

The most difficult thing for faculty to cope with was to let go of the control, not to get overly upset when students did not spend the whole semester with maternity patients, and to practice the philosophy of trust in the students' ability to cope.

The oral testing consumed a great deal of time.

The faculty initial reaction was one of excitement and fear. Would students have enough self discipline to accept the challenge? Faculty had difficulty getting the students to use the conference for sharing ideas, discussing problems they had had and faculty were forced to initiate the topic of discussion.

Conclusions:

The project staff believe that because of the students' degree of happiness and satisfaction and our feeling of success that we would like to try this method of teaching again with a more experimental design. However, since teaching methods used are usually validated only by professionally trained subjectivity, we feel our subjective analysis of results are relatively valid. Perhaps this system of teaching may be considered as teaching through counseling. One phase was informational guidance, giving the students the information about the course and its content. The balance of the teaching was through group counseling in the seminars and individual counseling. The oral testing and final written test was evaluation of the counseling effectiveness.

PROBLEMATIC SITUATIONS ENCOMPASSING BOTH PSYCHIATRIC AND PUBLIC HEALTH NURSING

Senior Students in Psychiatric and Public Health Nursing Courses

Florence M. McDonald **Stanford University**

Introduction:

Progressively a need has emerged for the development of an educational continuum between psychiartic nursing and public health nursing. Each one of these two major areas of the nursing curriculum is offered in sequential rotation during two of the three academic quarters of the senior year for all students majoring in nursing. Research on the educational process seemed to be indicated.

Nursing 176. 1 Unit. *This Seminar in Mental Health* and its' fundamental course requirement of an independent study — and *Nursing* 177. *Public Health Nursing*. 1 Unit of 5 Units. These two courses offered each academic quarter within the framework of the present curriculum were selected through which specific members of the faculty would endeavor to implement the concept of *TEAM TEACHING* and *INDEPENDENT STUDY* as instructional methodology during each and continuous throughout two academic quarters.

Instructional Team: Florence M. McDonald, Assistant Professor of Nursing (Psychitary); Josephine Hawes, Assistant Professor of Nursing (Public Health); and Ernest L. Bertellotti, Lecturer in Principles of Public Health.

Objectives:

The objectives of the study were:

(1) To provide opportunity for the development of an educational continuum between psychiatric nursing and public health nursing, conceptually and experientially.

(2) To provide opportunity for the student to understand and to undertake the operational sequence of experimental methodology.

(3) To provide opportunity for the individual student to demonstrate the acceptance of herself as the principal agent in the learning process.

Within the objectives the student activities were to:

(1) Initiate and complete an individual, independent study of clinical investigation in a sufficient area of concern that encompassed both a psychiatric nursing and a public health nursing focus with the problematic situation, and was to extend in two different clinical contexts, over two academic quarters).

(2) Understand some of the elements that influence the character of the judgments that she formulated.

(3) Demonstrate her ability to become self-actuating in directing her own learning and achievement.

(4) Demonstrate her functional level of literacy.

Evaluation Devices:

(1) Individual conferences were used by request and ranged in number from 1 to 32 per student with one or more of the faculty participants during the two quarters of academic effort.

(2) Two paper and pen tools were used at specific times, depending upon the quarter sequence for the student participants.

(3) A comprehensive and collective written report of the clinical study initiated and completed by each student was submitted in triplicate for evaluation by each of the three team teaching participants of the faculty.

(4) A group conference, comprised of the student participants, the team teaching participants and a consultant from general education was used as the summary evaluation technique.

Conclusion:

Student interest and enthusiasm was maintained at a positive working level.

Student understanding of areas of commonality of "content" in psychiatric nursing and public health nursing was extended in a practical and realistic manner.

Reinforcement of learning can occur in a meaningful process for all of the participants, students and faculty alike.

Indirect orientation for a wide range of community agencies about education in nursing at Stanford University was accomplished.

Precise planing is a necessary precedent to interdisciplinary teamwork.

INDEPENDENT STUDY AS A METHOD OF TEACHING

Senior Students in Advanced Medical Surgical Nursing

Julia Ory
Harriett Sprouse
California State College at Los Angeles

Introduction:

The problem of this study was to develop the use of Independent Study for students in the advanced course in Medical-Surgical Nursing. This course was offered the last eight weeks of the student's last semester in school.

No studies were found which had the purpose of determining the student's ability to identify nursing care needs. Several studies have been done on Independent Study in fields other than nursing.

Objectives:

The objective selected for evaluation was to increase the extent of agreement between student and instructor and on the identification of nursing care needs of acutely ill hospitalized adult medical and/or surgical patients.

Three hypotheses were established at the beginning of the study. These were that: 1) The increase in extent of agreement between student and instructor on the identification of nursing care needs of acutely ill hospitalized adult medical and/or surgical patients will be greater among the students on independent study; 2) A clinical experience of two weeks in an intensive care unit will allow for adequate evaluation of the student's ability to identify nursing care needs; 3) A tool can be developed for a systematic method of identification of nursing care needs.

Design:

The study was limited to the eighteen students enrolled in the Advanced Medical-Surgical Nursing course during the Spring Semester of 1964. On the basis of grade point average the group was divided into pairs. One member of each pair was selected for Independent Study. The other member was enrolled in the conventional course. One student not on Independent Study withdrew before the course was completed.

All students were required to meet the objectives of the course. Students on Independent Study were not required to attend the lecture period. Instead of writing the two required nursing care plans they could elect to write a paper investigating in depth some area of particular interest. Students on Independent Study were allowed to select the patients for whom they wished to care.

Evaluation Devices:

For purposes of evaluation a card sort consisting of fifty-five statements describing nursing care needs was devised. In order to allow for priority of needs, items were sorted in order of significance for a specific patient by using a seven-point distribution scale. The card sort was done by each subject on the first day and again on the day of assignment in the Intensive Care Unit. At the same time the instructor in that area did a card sort on the same patient used by the subject. In order to tabulate the data a score sheet was devised consisting of the statements with parallel columns for student and instructor beside each statement. The sorted rank of each statement was recorded for both student and instructor and the difference noted.

Conclusions:

Tabulation of the card sorts revealed that there was no significant increase for either students on Independent Study or students not on Independent Study.

The card sort developed for evaluation should prove useful not only as an evaluation tool but also as a learning tool. The subjects stated that it proved beneficial in heping them focus on specific needs of patients and in deciding on priority of needs.

Problems:

The sample of students was too small and the time allowed for increased ability to identify nursing care needs of patients was too short to permit generalipations from the findings. Futhermore, many of the nursing care needs of patients admitted to the Intensive Care Unit were so obvious that there was little chance for disagreement on the identification of the primary needs of patients.

After using the card sort for this study it was believed that a devision of some of the statements nedded to be made to eliminate ambiguity and to increase the reliability of the tool.

Ideas for Further Study:

The writers believe that a similiar study on a larger scale would be needed if the use of Independent Study as a method of teaching or the card sort as a method of evaluation is to be evaluated. It is suggested that a study encompassing the two required courses of Medical-Surgihal Nursing and rovering a period of two semesters miyht be more valid. It is further suggested that some method be developed whereby ealh student and a panel of instructors identify the needs of a specific patient.

INTRODUCING A NEW LEARNING EXPERIENCE INVOLVING INDEPENDENT STUDY AS A MEANS TO MAKE THE OBSTRETICAL EXPERIENCE MORE MEANINGFUL

Course for Junior Students

Marlys Raynes **University of Oregon**

Introduction:

The Public Health faculty has complained that the students were unable to transfer principles of obstetrics learned in the hospital setting to the home situation. By puting the student in a home situation and following the mother through her hospitalization for labor and delivery it was hoped that the student would become aware of the obstetric patient in the two situations and see the implication of pregnancy on the family.

Spring quarter was the end of the student's Junior year. The students had completed Medical-Surgical, Pediatric and Operating Room nursing experiences. The Senior year included Psychiartic, Public Health and Senior experiences. The group included 23 students. Their grade point averages ranged from 3.8 to 2.0. Most of the students come from middle-income families in rural areas. A few were from out-of-state.

The students had problems solving technique as Sophomores through the Mental Health coordinator. Previously the students had written or orally presented case studies and nursing care plans. The facus on these assignments was on procedures and/or the disease of the patient. It was felt that the student were now ready to combine these skills and to focus on the Obstetric patient and her family. Concurrent with Pediatric nursing courses the student had an introductory course in child behavior. Concurrent with Obstetrics courses students took a Sociology course called Marriage and the Family and a Psychology course called Psychology of Learning.

Objectives:

It was the purpose of this project to afford the student the opportunity to consolidate the previously acquired knowledge and to put it to practical use in caring for the Obstetric patient and her family.

Objectives for the students in this project included:

1. Identify pertinent problem pertaining to the parturition period in a selected family from Out Patient Clinic.
2. Formulate solution (s) to one of these identified problems.
3. Describe and compare the course of this mother's pregnancy and delivery with the normal.
4. Describe and compare this newborn infant with the normal.
5. Formulate and implement a Nursing Care Plan for the mother's post partum hospitalization.
6. Describe the areas of teaching needs of this family and evaluate the effectiveness of these teaching efforts.

Design:

A patient whose delivery date was within the next two weeks or less was selected by the student from the Prenatal clinics at the Out Patient Clinic. It was suggested that the pregnancy be uncomplicated whenever possible. The student planned to visit her selected patient at home once prenatally and post delivery. Written permission for these visits was obtained from the mother. The student arranged to be present when her patient was admitted to the hospital and during her labor and delivery. The student cared for the newborn in the nursery and the mother on the post partum area at least one eight hour day. A written description of the student's experience was due for the eleventh week of the quarter. Students was given a suggestion for content as these papers were graded with a number grade.

Evaluation Devices:

Impressions were used rather than scientific data. The written description of the student's experience was graded according to the planned schedule. The instructors observed the student working with the mother and newborn in the hospital situation. The instructor compared her evaluation of the family situation on to the student's evaluation.

Conclusions:

This teaching technique was very satisfactory to accomplish the objectives. The students who were able to follow their patients as planned identified this as their most enjoyable and valuable experience in nursing.

Problems:

Some of the patients selected lived or moved many miles from the school campus making a home visit impossible. Many of the selected patients developed complications of pregnancy when the purpose of the study was to follow an uncomplicated obstetric case. Due to substitute nursing staff two of the students were not called at night when their patients were admitted in labor.

Solutions:

Since the patients in the clinic are a very fluid population, investigate the probability of using patients from a private doctor's office. If the selected patient develops over-whelming complications, it may be necessary to select another patient. Instruct the patients to tell the admitting nurse that she is on the study. A card with the student's name and telephone number could be given to her patient to be used upon admission to the hospital.

Further Study:

Plan with the pediatric instructors to use this technique as a combined experience in normal obstetrics and pediatrics by following a family for two quarters.

SELF DIRECTED STUDY—AN APPROACH TO TEACHING A SENIOR NURSING COURSE, PRINCIPLES OF ADMINISTRATION IN CLINICAL NURSING

Margaret Sullivan **Seattle University**

Introduction:

The study was conducted during spring quarter, 1964. The course title was "Principles of Administration in Clinical Nursing," offering four credits for theory and six credits for clinical nursing experience. The course plan covering ten weeks called for twenty-one hours of clinical experience, three hours of conference, and four hours of lecture per week. Fourteen nursing students were enrolled.

Statement of the Problem — How can a course taught on the senior level be so structured in the leadership areas of nursing as to assist the student to assume more responsibility for her own learning and increase her skills in problem solving.

Objectives:

The major purposes of the study were:

1. To develop a plan for teaching the course Principles of Administration in Clinical Nursing using a modified form of the self directed (independent) study technique.

2. To determine whether the students could assume greater responsibility for their own learning.

3. To determine if self directed study would be an effective method to increase students' ability and skill in techniques of problem solving. The principles hypotheses proposed were that:

1. Students, if sufficiently motivated and properly guided, can assume greater responsibility for directing their own learning .

2. Students would learn as well or better in a self directed study course as in the traditional lecture discussion method.

3. Students in a self directed course of studies would achieve greater satisfaction because they would be actively engaged in planning how they could best attain their goals.

4. Self directed study would be an effective method for teaching the student theory of administration, supervision, and leadership.

Design:

Students were informed two weeks prior to the beginning of the quarter that they would be involved in a new method of teaching.

The course plan included eight hours scheduled discussion session and sixteen hours of clinical experience the first two weeks, one hour daily conferences four times a week for next two weeks, and fourty hours a week clinical experience for a period of five weeks — included in this was three hours of conference per week. Schedule for th last two weeks included, four two-hour seminars, two hours for final examination and individual student teacher evaluation conferences.

The conventional course structure was maintained; however, the eight hours informal discussion sessions were substituted for the previous formal lecture periods. The conferences were used to explore and analyze problems, the seminars were used to coordinate and summarize the learnings that had occurred.

The major problematical theme of the course was evolved around the concepts of leadership in team nursing.

The problems to be resolved throughout the quarter were: (1) What is team nursing? (2) What principles, concepts, tools and techniques of administration, supervision, and leadership are fundamental and applicable for effective functioning of the nursing team within the hospital structure? (3) How can the student increase her skills in problem solving in the role of a team leader?

Learning experiences in the clinical area the first two weeks were structured to provide the student with the opportunity to function as an assistant to the team leader and head nurse. They were given copies of a discussion of the team plan, and the functions, duties and responsibilities of the head nurse and team leader.

A bibliography was provided and a variety of resource material was available in the classroom. Students were informed that they would be responsible for identifying and working through a problem within the framework of the problems posed.

They were informed that they could work alone, in pairs or in groups. The instructor would be available for guidance at any time within the eight hour working day. The students would be responsible for making appointments.

Informal conference time would be scheduled for one hour a day for the second two weeks of the quarter. The students were not required to attend but the instructor would be available for all at this time.

Throughout, the instructor attempted to create an environment which would motivate and stimulate the students to think critically and analytically, to act creatively and to pursue undertakings purposefully.

Evaluation Devices:

Evaluation devices used to assess student progress included: pre and post tests — midquarter and final examinations in which objective and essay questions were used, and analysis of tape recordings of the conferences.

Films dealing with administrative and supervisory problems were shown to determine student's abilities to identify and analyze problems.

The behavior analysis of the objectives was used as a tool for checking performance in the clinical area by the supervisor, head nurse and instructor.

Other faculty members evaluated the tape recordings and students' written projects. Instructors evaluated reports by students throughout the quarter.

A multiple choice single response test which had been given to three previous groups of students as the final examination was given at midquarter.

Conclusions:

Student achievement was equal to previous groups. Comments from students indicated that most of them felt challenged and learned a great deal. Two students felt lost and confused most of the time. The instructor felt that it was the most stimulating course she had taught.

Data requires further analysis — before most definite conclusions can be drawn.

The process of group work seemed to be the most worthwhile result. Students had the opportunity to discuss problems and share ideas. The challenge and problems encountered in group problem solving appeared to be most beneficial for all students.

Problems Encountered:

Lack of experience and lack of special prepared materials were no doubt the most difficult problems.

This was as much of a learning experience for the instructor as for the student.

The need to prepare special materials, manuals and guides for students is evident. More refined evaluation tools are needed.

The most beneficial result was that students had the opportunity to do group-problem solving. The difficulty here was that not sufficient time was spent in the beginning of the course on how to do this effectively.

Recommendations:

Much more study is required of the use of this technique in nursing courses. It would seem that there is a need to explore ways to have students begin working as groups earlier in the course of studies. Although the approach in this study is not true independent study and there were many weaknesses, it would seem that at least it is a beginning and further study of the technique and its effectiveness is well worthwhile.

A study using the group approach to self directed study is highly recommended.

INDEPENDENT STUDY FOR SENIOR STUDENTS IN MEDICAL AND SURGICAL NURSING

Clarabelle Theobold **Arizona State University**

Introduction:

The senior year in a nursing program is often considered by students, as well as instructors, to be the last opportunity to learn the reams of knowledge necessary to be an effective practicing nurse. By the second semester of this year, students often find themselves in a state of panic due to their ideas that they must learn all about nursing while in school. Because of this, it was decided that independent study would be attempted by part of the seniors in their second semester of Medical and Surgical Nursing.

Independent study was perceived as a means of increasing student responsibility in learning and a way of preparing the young nurse to continue learning when she was no longer in an educational setting.

Objective:

It wos hypothesized that students doing independent study would learn facts and their application as readily as do students in a more controlled situation.

Design:

An experimental situation was devised in which ten pairs of students were matched according to five significant characteristics. Because of unexpected circumstances, one pair could not participate in the study. During Spring semester, groups consisting of one member from each of 9 pairs of matched students participated in this project. Assignment of members to groups was done randomly.

Class time for the experimental group was reduced 59% to allow the students to pursue their learning interests. During the hours free of class (while the other group attended class), instructors for the ekperimental group were available for individual conferences. The allocation of in-class time was planned as follows:

	Experimental Group	Control Group
Lecture (shared)	10 Hours	10 Hours
Conference	16 hours	64 hours
Clinical Lab.	8 hours/wk.	8 hours/wk.

Evaluation Devices:

The experimental group had only two examinations during the semester since members of this group were not following a predetermined sequence of learning. The control group had quizzes weekly throughout the semester in addition to the tfo examinations.

Findings:

The data on differences between groups was subjected to statistical analysis. The t-test was used and provided evidence at th .05 level of confidence substantiating the hypothesis. A follow-up examination is planned within the year to determine any difference in retention. It is anticipated that the group doing independent study will have retained a greater amount of knowledge.

Students in the experimental group indicated no negative feelings about again using independent study. Of the control group, 29% wished to use independent study if they had the opportunity.

Both instructors involved with the independent study group felt that this experience had been very exciting and was worthy of further consideration. The philosophy of the instructor as a catalyst rather than a purveyor of knowledge seemed extremely satisfying, both to instructors and to students.

SELF-DIRECTED STUDY AS A METHOD OF TEACHING

Senior Level Students in the Course: Principles of Supervision and Team Management

Commorah E. White **University of Oregon**

Introduction:

During the senior year of three academic quarters, students have three rotations; Senior Clinical Experience, Psychiatry and Public Health. The senior class is divided so one section of students is in each of the three areas. The students in the present study hal all but tw completed their nursing courses in Psychiatry and Public Health. Concurent with the course Principles of Supervision and Team Management, the students were assigned in the clinical area for two eight-hour periods and one six-hour period followed by a two-hour seminar. Some of the students were enrolled also at Portland State College for three six-hours, either to finish requirements for the baccalaureate degree or for their own pleasure.

Objective:

To introduce Self-Directive Study as a method of teaching Principles of Supervision and Team Management.

The student objectives were: (1) to acquire knowledge of the principles of supervision and (2) to increase skill in the use of problem solving technique as applied to supervision.

Design:

The twenty-three students enrolled in the course Winter Quarter served as the control group. Principles of Supervision were presented in the first part of the quarter; the focus of the last part of the quarter was problems prepared by the students ni skit form and based on what they encountered in their concurrent clinical practice in three hospitals. These were presented and discussed using application of principles of supervision. Students prepared examination questions from problems they had encountered. The final examination consisted of many of these problems.

Self-Directed Study was introduced to the experimental group which consisted of thirty students in Spring Quarter. Essentially the control and experimental groups were comparable except in number. Both groups had varied backgrounds and interests; their home environments were a cross section of social and economic situations. The length of quarter was the same for both groups and the same written assignments were required. However, the skits used for problem solving for both groups had been prepared by the control group. The cumulative grade point for the control group ranged from 2.17 — 3.40 with a mean of 2.80 and for the experimental group from 2.28 — 3.76 with a mean of 2.78.

Evaluation Devices:

The final examination for the control group was used as the pre-test and final examination for the Self-Directive Study Group. The mid-quarter examination was the same for both groups.

Conclusions:

The range of achievement on the final examination was:

Control group (Winter)	70% — 88% — mean of 79.98%
Self-Directive Study	71% — 86% — mean of 78.17%

From the written reports the students appeared to like Self-Directive Study but some felt they needed more guidanc from th instructor. Others felt that it would have been to their advantage if, after the group sessions, it was arranged for them to meet in the formal classroom to discuss the learning experiences gained in the small groups.

It was difficult to assess the outcomes of Self-Directive Study. The content of the course lent itself to this approach. The instructor believed in the method and felt that the more mature students gained a great deal from the course, while the more immature students felt insecure and preferred spoon-feeding. However, the only tool used for valuation indicated no difference between the outcomes for the two groups.

The instructor gained immeasurably from the experience. The bibliography prepared for the students was recent material, it was comprehensive and covered a wide range of subjects as weel as covering experiences, opinions and ideas of authors from many parts of the country. The awareness of the impact of Self-Directive Study in colleges across the country was a source of increased study and learning for the writer.

Problems:

As three sesions of the formal class for the Self-Directive Study Group were given to the pre-test, final test, and the papers returned to students for discussion the final session, this was a limiting factor.

The greatest problem encountered was an evaluation tool which would be fair to all students in the application of principles in problem solving situations. Students in the project group were assigned in three different hospitals, thirteen different hospital units and had seven different clinical instructors with varied backgrounds. Also in the hostpital units were eight instructors with sophomore students and several students in the Master Program doing their practice teaching. With all the varied disciplines and situations the senior students encountered, it appeared to the writer that a tool of evaluation for the application of principles to be used in the classroom was the most important area for further work and study.

Future Plans:

The writer would attempt Self-Directive Study again but would spend time and effort in trying to modify attitudes of participating members toward Self-Directive Study before doing another project of this nature. A different textbook for the course would be selected, and, if possible, mor time allocated to cover the course content.

ABSTRACTS OF PROJECTS UTILIZING TEAM TEACHING

AN EXPLORATORY RESEARCH STUDY OF THE SYSTEM OF TEAM-TEACHING

Freshmen Students in Maternal-Child Health Nursing
and
Sophomore Students in Medical-Surgical Nursing

Cynthia G. Barnes **El Camino College**

Introduction:

Certain lacks and inadequacies had been encountered in systems where individual teacher planning, presentation and follow-up efforts were used exclusively or where group coordination and functioning were severely restricted. This study was based upon the beliefs of the faculty that (1) when instructors are involved in all phases of the educational program they feel a comitment to the program which stimulates the mto contribute freely of their knowledge and skills, (2) awareness of the total program, together with group planning leads to consistent, close correlation of content and laboratory experiences, and (3) a democratic theory of administration which has for its core, respect for the individual worth of man, is completely compatable with the democratic processes of group effort toward decision-making.

The problem of the study was "Does the team teaching system provide an organizational structure in which (1) a democratic theory of administration can be implemented, (2) resources of individual faculty can be used effectively, (3) repetition and/or omission of content be eliminated (4) meaningful sequence of learning be assured, (5) students learn to tranfer known principles from one situation to another, (6) comparable learning experiences are made available to students and (7) the growth of the individual instructor is miximized through group participation and problem solving approaches to group concerns in the development of an educational program.

Objectives:

1. Use strength of individual instructors effectively throughout curriculum
2. Maintain close correlation of content and laboratory experience.
3. Asure comparable clinical objectives and clinical evaluation.
4. Build a cognitive structure which will cover content and clinical objectives *effectively* with greatest economy of time.

g. Faculty acts as model for students which will stimulate them to read

Design:

pertinent material outside of assignments, participate actively in class discussion, and use group processes.

6. Function effectively within a group in cooperative planning and in sharing responsibility.

Team teaching has been in effect for a year and a half which is also as long as the program has been in existence. This year faculty teaching first year students, and faculty teaching second year students, were sub-grouped for purposes of detailed curriclum planning. Meetings for each of these groups were scheduled for 2 hours twice each week. A 3 hour meeting was scheduled every week for total faculty curriculum study and planning. The director participated in all total faculty meetings. She participated in the meetings of the sub-groups on request from the group, or at least twice a month. Instructors were required to participate in all scheduled sessions. This much structure was believed to be necessary if objective goals were to be reached.

A lad teacher was formally identified for each sub-group. The lead teacher did not assume a leadership role in the group sessions at all times. The leader role changed from session to session and even during a single session. The director assumed the role of a faculty member in sub-group sessions.

Group members worked earnestly to reach concensus of opinion in making decisions. In keeping with democratic processes however, the minority must yield to the majority occasionally. In these instances, each member recognized her responsibility and obligation to carry out the final plans.

Tasks identified which must be carried out in group work were:

I. Development of clinical objectives.
II. Development of clinical evaluation tools.
III. Determine depth and scope of theory.
IV. Determine depth and scope of theory.
V. Decisions as to where suecific learning can best be achieved, e.g. college laboratory, hospital or other community agency.
VI. Group maintenance functions.

Tasks identfied which can be carried out individually without disruption of the team teaching system were:

1. Development of detailed lecture notes.
II. Compilation of bibliography, reference reading and audio-visual aids to be submitted to the group for selection of critical materials.
III. Maintenance of student anecdotal records.
IV. Evaluation of nursing care plans for students in the individual instructor's section, consults team members only in special circumstances.
V. Counseling students in the individual instructor's sections, Re academic and personal problems as necessary.
VI. Periodic discussions with students concerning their over-all progress.

Evaluation Devices:

Faculty planning sessions and student post-conferences were tape-recorded; the recordings were analyzed in relation to the stated objectives and categorized on the Bales Interaction Scale.

A student questionnaire was developed and answered by each of the 66 participating students.

A faculty questionnaire was developed and answered by full-time faculty, two student teachers and the coordinator.

Additional questionnaires were developed to collect data not available by analysis of tape recordings, such as faculty and student reaction to team teaching.

Conclusions:

Findings of the study lead to the following conclusions. Faculty members participated actively in both sub-groups and total group. Degree and kind of participation varied moderately among the individual members.

Instructors believe they contributed effectively from their special areas of knowledge and ability/strengths, and that this was a satisfying experience.

Instructors identified and strengthened weak areas through faculty planning sessions, through student-instructor relationships, and by attending content presentations of fellow group members.

Behaviorally stated clinical objectives and clinical evaluation tools were developed in group session, and faculty felt confident of their application and utility in varying clinical situations. Instructors were usually, but not always, in complete agreement with the above. They found the disagreement frustrating in some instances but this frustration was reduced by group discussion.

Two-thirds of first year students felt that faculty always or usually agreed on what they were to learn and how they were to be evaluated. One-third felt that they did not, or only at times, agreed. Three-fourth of the second year students felt that faculty agreed and one-fourth felt they did not or only at times. The only legitimate conclusion here, is that faculty and students are not in agreement about whether faculty agree.

Common elements/components were identified in group session. Students believe they identfied these components in varying clinical situations and at varying levels of complexity.

Three-fourth of the students believed there was no unnecessary repetition. Students who believe there was excessive repetition said it was on the psychological aspects of nursing.

Identification of common components were very helpful in eliminating repetition of content and experience. This was also the major factor in being able to use a variety of clinical situations for the same learning experience.

Students did extra, unassigned reading and participated in class. Most students believed instructors stimulated them to do this. They rejected the suggestion that they were forced to do this.

It seems then, that in the overall perspective, the system of team teaching was successful in relation to the objectives of this study.

Problems:

1. The tools used for data collection were inadequate; pressures of work load and lack of staff influenced this. There were also limitations in data analysis.
2. One faculty member had had some recent unpleasant experience in group work and some carry-over was evident to the rest of the faculty.
3. A major problem in analyzing tapes for data on group interaction was that the non-verbal communications were missed.
4. The role and function of the lead teacher posed a difficult problem until a written description was developed. One individual became quite authoritarian and directive while the other showed signs of great frustration and threatening withdrawal.
5. All faculty expressed urgent need to delineate level of performance expected of students at intervals, e.g. by the end of each semester. An attempt to do this is reflected in continuous revision of the evaluation tools.

Possible Solutions to Problems:

Preparation of a faculty prior to instituting this system of teaching is primary and essential. This should include careful delineation of tasks (work) to be done in group process and that which is to be done individually. There should be an expressed willingness of all members of the group to work in such a system. For some individuals it is extremely difficult to do group work and for some it may be impossible. Varying degrees of knowledge, experience and ability concerning group work exist among any group of individuals. It is strongly urged that an individual with expertise in this be brought in to conduct some sessions in group interaction and process per se. One of the involved individuals cannot do this effectively. Individuals fairly well experienced in group process become frustrated when 1 or 2 members cannot function.

A written description of the lead teacher role should be discussed, understood and accepted by each group member.

Some fair and equitable arrangements should be made with administrators to allow credit for time involved, e.g., listening to all lectures and for group meetings.

The system should be adapted in relation to the unique characteristics of the home institution.

Some plan for continuing study and evaluation of the effectiveness of the system should be developed before its initiation. Even though no formal study is to be reported, it is vitally important that evaluation tools be developed which will measure effectiveness in terms of both production and satisfaction.

Ideas for Future Studies:

The author expects to repeat this study in a new situation and improve it considerably by following the above recommendations. Following that, it is hoped a study can be made which will attempt to measure the effect of team teaching on student learning in comparison to other methods of teaching, e.g., individual teaching.

THE TRANSITION FROM HOSPITAL TO HOME

Senior Students
Public Health Nursing

Marcia L. Bradley **University of Wyoming**

Introduction:

The problem was to utilize team teaching in one unit of the public health nursing course. Senior students were to be given the opportunity to receive more experience in the hospital setting and to relate care of the patients to home and the functions of the public health nurse. The purpose of the team teaching arangement was to utilize faculty members' expertness in evaluating senior students meeting the requirements of the unit of study.

Team teaching was economical time-wise because public health instructors were relieved from the students' laboratory time. Clinical instructors did not have additional hours because of their responsibility for junior students. Team teaching made for more personal instruction and gave students contact with the specialists of each area.

Students were seniors in a four year collegiate program. They had had clinical nursing in all areas and were registered for public health nursing.

Objectives:

Project:

The study sought to evaluate the team teaching method as a means of specifically relating hospital care of patients to home care and establishing that continuity of care should exist and be maintained on a two-way communication basis from the hospital to the public health agency and vice versa.

Teacher:

1. To give the student opportunity to give nursing care to hospitalized patients.
2. To give the student opportunity to evaluate patients for the possibility that home care might be beneficial.

3. To give the student opportunity to establish continuity of care from the hospital to the home.

4. To give the student opportunity to identify criteria which are pertinent in making an accurate decision regarding the need for home visits.

Student:

1. To increase your skill in providing physical and emotional care for the hospitalized patient.

2. To identify significant situations where home visits would be beneficial.

3. To increase your ability to make judgments in determining which patients and families require professional skill in follow-up care.

4. To support your decision by using specific criteria.

5. To obtain orders from physicians for home care when it would be beneficial.

Design:

Each student spent twenty-four hours in the hospital caring for seven patients. These seven patients received total nursing care and were evaluated by the students for the necessity of having home visits. Information about each patient was written up on the provided form. Students made home visits to each patient to test their judgments. Again criteria were listed which substantiated or proved their judgments wrong.

One patient, chosen by the student, was presented to the class in a case study.

Team participants were instructors from public health, medical-surgical nursing, and pediatrics. It was the function of the pediatric and medical-surgical instructors to supervise the students in the clinical setting, to evaluate the patients to determine if a home visit would be beneficial, to determine if the students used all the available criteria for making their judgments, and to act as consultant for the conferences which the students presented to the class. The clinical instructors were responsible for the care given by the students to patients in the hospital and were helpful in maintaining relationships with the hospital personnel.

The public health instructors helped the students evaluate the criteria for making their judgments regarding the need for a home visit. After the students had made their home visit to test their judgment, the public health instructors then discussed the cases with the students to evaluate their decisions.

The medical-surgical instructor acted as team leader. However, this leadership is to be the responsibility of the public health instructor in the future because the students are registered for public health and are issued grades by the public health instructors.

Evaluation Devices:

The teacher objectives were met by the management of the unit. The first, second, and third student objectives were evaluated by the clinical instructors. Both clinical and public health instructors were involved in evaluating the fourth objective. The fifth objective was evaluated by the public health instructors only. Students wrote evaluations of the team teaching method and expressed that the objectives had been met. The method was tried with two groups, and difffferent dissatisfactions were expressed. Most of the problems were with the learning experiences, not with the method of teaching. Faculty evaluated the method throughout the semester. No written evaluations were received, but the participants freely voiced their opinions.

Conclusions:

The team teaching method was successful in meeting the purposes of the unit of study. The method gave the students a realistic approach to continuity of care and gave them opportunity to put into practice the concept. Satisfaction was achieved among the participants after the second trial. Most of the problems which arose were not due to the methodology but were due to the nature of the learning experiences. The same problems could have occurred had one instructor planned the unit of study. It is strongly recommended that adequate planning be done before team teaching is tried.

Problems:

The major problem of team teaching encountered was lack of leadership. During the first trial, no participant was designated as leader. Because of this confusion was noticed on the part of the student and the participants. Before the second trial, the medical-surgical instructor was appointed leader. This step solved the difficulties with team teaching. There was no disagreement between the participants concerning objectives of the unit or evaluation.

Future Plans:

The same participants plan to use the team teaching method for this unit of study. The methodology has not been altered, but mechanics of the learning experiences have been changed to meet the needs of the instructors.

INTRODUCING PLANNED CONTENT AND LEARNING EXPERIENCES FOR NURSING CARE OF DIABETES MELLITUS INTO A TEAM TEACHING SITUATION

Sophomore Medical-Surgical Nursing

Dorothy Elhart **University of Oregon**

Introduction:

The teaching team itself was semi-organized, well-oriented to group interaction, but self-limited to planned team work and team participation due to a previously rapid changing curriculum. Specific areas of weakness among several in the student group, identified by instructors in the speciality areas, were a lack of theoretical knowledge and implementation of nursing care principles regarding patients with diabetes mellitus. Because of a lack of defined, planned content for implementation in the clinical areas by all clinical instructors on the team, students were either not receiving information or receiving inconsistent information relative to good diabetic nursing care.

Objectives:

The primary purpose of the project was to provide specific planned content to be implemented in the clinical areas so that each student would have the opportunity to care for a diabetic patient, try to meet the stated and individual instructor's objectives of learning outcomes and be able to evaluate the behavior outcomes.

A secondary purpose was that of motivating the eight clinical instructors and other resource persons for more effort in using the method of team teaching leading to evaluation of methods of teaching and defining problems and solutions.

Basic over-all objectives for student learning were:

1. Observes the pertinent physical and emotional signs and symptoms of the diabetic patient being cared for.
2. Carries out principles of diabetic nursing care with safety and skillful technique.
3. Recognizes the diabetic patient as an individual; evaluates his self-understanding of his disease and initiates the patient or family teaching needed.

Design:

The project was couched to develop planned content for classroom lecture and panel discussion proceeding to integration in ward conferences and ward activities based on the student objectives and anticipated behavior outcomes. The team was oriented to cooperativeness and interaction based upon common understanding of purposes. The teaching team consisted of eight medical-surgical instructors in the clinical areas, seven practice-teacher master students, two psychiatric nurse consultants, a dietitian and other resource persons, utilized to the best maximum in the field of their abilities. The physiopathology and nursing care theory of diabetes mellitus was a four hour classroom segment of a two week unit on common endocrine pathologies. The evaluation devices and their relative use was included in the team orientation.

Evaluation Devices:

Evaluation devices consisted of: (1) a 25 point multiple choice pre-test and post-test, (2) a ward conference check-list regarding planned topics to be covered in addition to classroom reinforcement, and (3) a clinical rating scale and comment anecdote made by each clinical instructor regarding her evaluation of the abilities of each student based upon the objectives of anticipated behavior changes.

Evaluation of the team teaching method was done verbally in a group meeting.

Conclusions:

Each student was provided with the opportunity to give and plan nursing care for a diabetic patient, including the mixing and injecting of insulins and carrying out urine reductions.

The pre-test and post-test score error percentages showed a desirable reduction in the majority. The results of behavior outcomes indicated by the instructors clinical rating scales revealed 41.2% of the students acquired a good understanding of knowledge with ability to identify patient needs and carry out effective patient teaching. 12.5% demonstrated a poor understanding of theory and application of nursing care to patient needs. The groups falling in categories between were indicative that students were demonstrating problems in areas concerning:

1. A realistic viewpoint regarding self-care and home environment combined with public health awareness.
2. A lack of ability to discriminate at what point teaching is actually needed and where needs are diffferent.
3. A lack of ability to follow through the teaching and it's effectiveness.
4. A lack of ability to establish effective communication to discern patients'real needs.

Those students assigned to medical wards for clinical experience consistently did better on pre and post-testing and in nursing care performance. The small group of students assigned to a diabetic outpatient clinic for experience on selected rotation also did better at discerning patients' needs.

Problems Encountered:

There were not problems as such, pertaining to the presentation and implementation of planned content by the team. Resource persons on the panel discussion were excellently prepared, classroom lecture time was adequate, ward conferences were arranged, planned and implemented as scheduled and all data materials were well kept by all concerned.

The teaching team had been functioning as a loose, independent group without direction so the team leader was well able to establish interaction and cooperativeness. Planned content that was utilizable with a purpose was motivating.

Possible Solutions to Problems:

The team together expressed the opinion that the problem areas which the students encountered relative to diabetic nursing care were consistent and similar to those encountered concerning long-term chronic illness as a result of other disease pathologies. The psychiatric nurse consultant, who is the mental health coordinator for the entire program, made plans to alter the mental health seminars concurrent with fundamentals and medical-surgical nursing in order to introduce process recording, self-interaction development, role-playing and interviewing techniques at an earlier period, lending to placing more understanding to chronic disease complexes. It was also concluded that more emphasis should be given to the aspects of public health.

The instructors were enthusiastic to continue the use of planned content for clinical integration in all further use.

Ideas for Further Studies:

To devise a study using a larger number of students consistently in the diabetic outpatient clinic on the campus and also in the Veteran's Hospital; using them as a control group in order to determine further effectiveness of understanding chronic illness.

TEACHING OF INTRODUCTORY NURSING

Sophomore Nursing Students

Argentina L. Friedley **University of Nevada**

Introduction:

Three instructors were assigned by the Dean of the nursing faculty to teach the first semester of the sophomore year. One of the instructors was selected by the Dean to be the coordinator of the team since this teacher had prior experience with the course content.

The problem for study was: "Is the team teaching method of significant value to warrant it's use in a baccalaureate program of nursing?"

Objectives:

The team teaching method was instituted the first semester of the academic year, to coordinate the instructional talents of the teachers, to enhance the learning experiences of students, and to afford inexperienced teachers the opportunity to work closely with experienced teachers.

Design:

Upon general agreement, the three instructors attended all formal classes and were assigned a specific portion of the course content. The assignments were relevant to their speciality. Each instructor assumed responsibility for a specific clinical facility.

In addition, the instructors participated in the classes as the need arose. Each student spent approximately six hours per week in the assigned clinical facility. Community facilities were used to provide the students with the necessary experience. Instructors in public health, psychiatric and geriatric nursing were used as resource persons.

Evaluation:

Students had individual, mid-term and final semester conferences with the teaching team. The purpose of the conferences were to assist the student to evaluate her progress in the nursing course.

The questionnaire used for this study was adapted from the WCHEN "Leadership Seminar No. 3" Workshop.

Results:

The main problems encountered by the team teachers were:

1. A lack of time to orient the new faculty members to the team teaching method,
2. Difficulty in finding time to plan and organize the course content,
3. Inadequate guide lines,
4. Lack of information regarding the team teaching method,
5. Poor interpersonal relationships.

The initial experience from the teachers' point of view of the team teaching method was not successful for this particular baccalaureate program of nursing. However, it is believed by the writer that the negative experiences of the team teaching method can be an asset for th next study in team teaching.

Future Action:

The team teaching method will be instituted the first semester of the forthcoming academic year. Future action includes:

1. Adapting the guidelines as proposed in "When is a Team a Team?" by L. L. Cunningham.
2. Particular emphasis will be placed on allowing time for advanced lesson preparation, be prepared for problems, providing information regarding team teaching, post evaluation after each demonstration and formal class presentation.

NURSING CARE OF PATIENTS WITH PROBLEMS OF FLUID AND ELECTROLYTE BALANCE

Sophomore Students
Baccalaureate Degree Program
Medical-Surgical Nursing

Marie Haddad **Pacific Lutheran University**

The instructors at the Pacific Lutheran University School of Nursing employed team teaching in Medical-Surgical Nursing primarily to meet needs of the increasing numbers of students enrolled in the course and to equalize the faculty-student ratio in the clinical area. Medical-Surgical Nursing was taught in the sophomore year.

This was a pilot study in which a new approach to teaching was selected. Problems of patients with medical-surgical conditions were identified and selected for teaching the content. Basic principles for each unit were identified and compiled to guide the instructors in the teaching situation.

Problem:

Careful team planning can provide better correlation in teaching a unit in "Nursing Care of Patients with Problems of Fluid and Electrolyte Balance."

Objectives:

The objective of the project was to study the use of team teaching as a method to meet more effectively the course objectives. The course objectives were to enable the student to:

1. Name body fluids and identify their percentages of body weight.
3. Name the electrolytes and their normal concentration in the human body.
3. Identify abnormal concentrations of electrolytes in the human body.
4. Write an effective nursing care plan identifying problems of patients with fluid and electrolyte balance.
5. Initiate and carry out nursing measures to meet the needs of the patient with problems of fluid and electrolyte balance.

Design:

In this situation the three participating instructors cooperated in planning the teaching of the course at regular weekly meetings. The course outline was the outcome of a cooperative endeavor of all members of the team. In the initial meetings the responsibility for teaching the theory was discussed and content was divided to meet the instructors' preference and ability to teach the particular units. The number of hours for each unit was decided upon, allowing time for flexibility. The main objectives of the ensuing meetings were to get feedback from previous learning experiences and to plan for the following week. Basic principles of the unit to be taught were identified and presented for discussion. These guided the instructors in the selection of clinical asignments and in the discussions in individual and clinical conferences.

Once every week the clinical conference included all students and instructors in the Medical-Surgical area to share experiences and discuss patients' problems and principles basic to nursing action.

In this project the weekly clinical conferences, the evaluation tools set up for the learning experiences, and the feedback brought by the instructors to the weekly meetings were the criteria employed as to whether the instructors made use of the guiding principles prepared by them.

Due to limitations in time and facilities, the only indications as to whether the instructors used the principles in their clinical teachng was through their remarks during the weekly meetings on how well the students used these principles in the clinical area and in conferences; and by the ability shown by the students in identifying principles as a basis for nursing actions in their daily nursing care plans.

Other evidences of the merit of this method were the favorable comments made by the accrediting visitors during their observations of students in the clinical conferences, and the examination of students' nursing care plans. Also in the final tabulatfon of results of evaluations done by the university to determine the effectiveness of the teaching of faculty members, the students in the Medical-Surgical course had favorable comments on this method of teaching.

Problems Encountered:

1. Because the approach to teaching the content was new and unfamiliar to inexperienced instructors, they felt insecure.
2. Most of the team members had difficulty identifying scientific principles.
3. Approximately fifty percent of the team were negative to the team method.
4. The limitations in time and facilities to set up tools to evaluate this method.

Conclusions:

The advantages evidencffed in this method of teaching were as follows:

1. The course in Medical-Surgical Nursing was the outcome of cooperative planning.
2. Team members worked cooperatively in identifying principles.
3. Content was divided to meet the instructors' preference and ability to teach.
4. The faculty-student ratio was equalized in the clinical area.

Recommendations:

Team teaching has its merits and should make contributions to nursing education when faculty members are previously oriented to the team method. Inservice education programs in group process and in the identification of scientific principles to prepare faculty for this method of teaching should be also helpful.

AN INVESTIGATION OF TEAM TEACHING IN MATERNAL-CHILD NURSING

Sophomore Students
Baccalaureate Degree Program

Mildred Knudsen **Montana State College**

Purpose:

The purpose of my study was to investigate team teaching as a system for instruction in Maternal-Child Nursing. It was assumed that team teaching would result in immediate curriculum improvement and improvement of student learning experiences, and in long term improvement of the attitudes of the Maternal-Child Nursing faculty toward curriculum development.

Objectives:

A. The immediate objectives to be achieved by the project were:
   1. Maintenance of focus on principles that apply to many situations.
   2. Identification of a common core of knowledge in Maternal-Child Nursing.
   3. Elimination of duplication of content.
   4. Assimilation of knowledge from both fields.
   5. Selection of critical core material.
   6. Awareness of each instructor's contribution and relationship to the course.
   7. Awareness of nursing situations in both areas.
   8. Greater control of learning experiences through correlation of activities.
   9. Strengthening perception of the family, its environment and relationships that effect each of its members.

10. Promotion of health principles and prevention of illness as well as competence in nursing skills.
11. Lessening of stress for students.

B. Long term objectives were:
   1. Promotion of Maternal-Child Nursing rather than separate areas of nursing.
   3. Broadening view of nursing.
   3. Establishing a realistic, on going, in-service opportunity to change, adapt, and grow.
   4. Promoting faculty stability.

Design:

The design of the report was descriptive. A single course outline for use by the team of instructors was developed as a basis for team teaching in Maternal-Child Nursing and this outline was used for classroom instruction and planning of student learning experiences during clinical experiences.

Evaluation:

Evaluation devices used were:

1. The development of the single course outline for teachers.
2. Tape recordings.
3. Activity logs of students.
4. Teachers diaries.

Conclusion:

The team has broadened their understanding of Maternal-Child Nursing through the development of the single course outline for teachers. The increased understanding has contributed to the learning experiences of students and has resulted in improved patient care.

Problems Encountered:

Problems encountered were:

1. Motivating all members of the team to contribute to the collection of material, discussing, selecting, planning and preparing each section of the outline.
2. Channeling the amount of time and energy needed for collecting, discussing, planning and preparing each section of the outline from busy schedules.
3. Lack of time and energy for collecting, discussing, planning and preparing each section of the outline.
4. Motivating all members of the team to assume a fair share of the responsibility for team teaching.
5. Changing curriculum schedules caused changes in basic planning limiting the team teaching activity to a five week session instead of the ten weeks planned.
6. Changing decisions regarding format of student's outlines has delayed the development of the student outline.

As the team worked together, each developed skill in various areas and developed confidence in the value of each contribution. As each members became more confident, less motivation was needed by fellow members of the team and a greater share of individual responsibility is being assumed. Much time and energy continues to be needed but satisfaction in student accomplishment and patient care is rewarding.

The faculty council has continued to discuss format for student outlines and this decision was necessary before completing the student outline.

The change in curriculum schedule was a general faculty decision and these limitations were beyond clinical faculty control.

Ideas for Further Study:

This project is very incomplete and the team wishes to continue to study the team approach to Maternal-Child Nursing and to develop a student outline which will be a tool for student learning and student evaluation. The result will be a better patient care.

TEAM TEACHING IN MATERNAL-CHILD NURSING

Sophomore Students Associate Degree Program

Sylvia Pompura **Chaffey College**

Introduction:

A. The problem confronting the teaching team was: Devise a method whereby the students would have observation at a community resource in the area of maternal-child nursing.
  a. Same agency used by all the instructors simultaneously.
  b. Better correlation of subject material.
  c. Provide for the student and observational experience, whereby the student would acquire knowledge of the nurses' role in the community resources.
  d. Plan for transfer of knowledge from one situation to another.

B. Rationale of this method of teaching:
  a. Utilization of the background of the individual faculty members to a greater advantage.
  b. Planning together would lead to more consistent and better correlation of the subject content and the laboratory experiences (in this instance the observation in the community agency.)

C. The teaching team of Maternal-Child Nursing consisted of three instructors.
  a. One had a background of pediatric and obstetrical experience.
  b. Second one had a background of pediatric and medical-surgical experience.
  c. The third one had a background of public health and psychiatric experience.

D. The student group were the sophomore students in the spring semester of 1964.

Objectives of the Teaching Team:

1. Cooperative effort and better correlation of subject material and laboratory experiences (in this instance the observation in the community agency).
2. Develop clinical objectives for the students in the community agency.
3. Develop better cooperation and more effective teaching by the team.

Design:

The three instructors worked together and combined resources for material-child nursing. Student observation in clinical agencies was the focus. Plans were formulated concerning the type and kind of community agency to be used by this team.

The class was divided into two sections and students were in either their pediatric or obstetrical lecture at the same time. A one hour combined class was held each week at which all students and the three instructors were present.

Evaluation Devices:

1. A paper and pen examination.
2. Personal contact and interviews.

Conclusion:

1. Due to effort of the teaching team a total of fifteen various community agencies were used.
2. Students were better prepared for observational experience.
3. Instructors had more time to exaluate nursing care and develop own class material.
4. Counseling students in subject material was simplified as the groups were smaller.

Problems Encountered:

1. Care had to be taken in choosing agencies, due to transportation and scheduling of visits.
2. Acceptance of modifications of the instructors' ideas.

Solution to Problems:

1. The team recognized the existence of problems and through discussion, possible solutions were reached.
2. Better anecdotal notes to be kept.
3. Develop better interpersonal relationships and thus eventually lead to better communications.

Plans for the Future:

1. Setting up criteria for determining the amount of carry-over into advanced nursing situations.
2. Determine how much this experience has influenced the students extension of their roles as a member in the community. (as a parent, voter, P. T. A., etc.)
3. Help students to have an appreciation of problems (administrative, finance, etc.) of the agencies used while operating in a particular community.

TOWARD MORE COMPLETE CORRELATION OF KNOWLEDGE AND IT'S APPLICATION WHEN USING TEAM TEACHING

Sophomore Students

Medical-Surgical Nursing

Marie L. Stratton **Walla Walla College**

Introduction:

Six instructors have been acting as a team, both in the presentation of facts and principle sand in applying this in the clinical situation in Medical-Surgical Nursing. The team has spent many long, cooperative hours in attempting to plan a program based on sound learning principles. However, it has been felt that more effective correlation of knowledge and it's application could and should be achieved. The purpose of this project was to evaluate the present correlation and to try, with subsequent evaluation, a new plan in an attempt to reach more complete correlation.

Objectives:

- I. To examine existing correlation of theory with lab experience.
- II. To make more effective correlation possible.
- III. To evaluate the achievement after more effective correlation has been possible.

Design:

- I. Determine existing correlation of theory content with lab experiences.
  - A. Visit ward conferences weekly over a five week period. List student assignments and topic of discussion for that day.
  - B. Give pre-test over a basic principle to be taught during the observation period.
  - C. Repeat the test following the observation.
- II. Summarize data and present to team.
- III. Present a plan which might make more effective correlation possible*
  - A. Present a portion of theory content based on scientific principles.
  - B. Have student identify problems of the patient which most closely correlated with current theory content.
  - C. Have student state the problem, nursing action and scientific principle on a 3 x 5 card to be evaluated by instructor.
  - D. Instructor to have at least one ward conference discussion per week based entirely on problems and principles correlating with theory content.
- IV. Evaluation.
  - A. Carry out lab-theory correlation evaluation as used in phase I to see if better correlation was achieved.
  - B. Periodic discussion with team members to evaluate progress and discuss problems.
  - C. Give a second written pre-test and post-test using stated objectives as a basis for forming an objective, situation-type examination over facts and principles and their application in directing nursing action.

Conclusions:

One cannot say that any clear cut conclusions were derived from this study. Inferences for our group seemed quite significant but nothing can be set down in concrete mathematics.

As was anticipated the instructors and students were concentrating on the situations unique to each lab unit. Because it was extremely difficult to transfer current theory to a unit where the specific situation did not exist, sixty-five per cent of the problems students were seeing on lab were beyond theory content.

The trial plan presented in an attempt to provide for better immediate application of theory was not carried out without problems. A high degree of skill is required by the instructor, and students should be more gradually oriented to the scientific principle approach. Because of the short length of the trial most of the time was spent becoming familiar with the method. Students and instructors were stimulated to understand and apply broad scientific principles rather than being limited to memorization of nursing action appropriate in specific situations. Some of the instructors continued to use the plan and felt it was of definite value. It was felt that with experience and further study this plan could and should be adopted as part of the total program.

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*Note: This plan does not eliminate the instructor's responsibility for promoting total patient care on both an individual and group basis.

The pre-testing and subsequent post-testing showed no increase in learning in the trial situation over that of the observation period.

Problems:

Briefly stated, the major problem was a lack of experience in using the new plan on the part of both instructor and student.

Possible Solution:

I. Orient the student to this approach at the beginning of her experience in the clinical division.
II. Intensive in-service education conferences among team members.
III. Possible rearrangement of the team so that one instructor would be responsible for classroom instruction over a longer time period.

Ideas for Further Studies:

I. Continue to work with this plan on an academic year basis.
II. Attempt to find some point of evaluation for extension of plan.

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